

Thesis/
Reports
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**Social Values in a Dynamic Policy Arena:
Methods for Mapping Values Discourse**

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(Final Report)

Final Report

**Social Values in a Dynamic Policy Arena:
Methods for Mapping Values Discourse**

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PROSPECTUS – 9/24/02

1. Book Contents and Thesis

How can contemporary theories of social change and modernization shed new light on valuation processes as they are applied in natural resource management? To answer that question, this book traces the conceptualization and application of social values and valuation processes from past traditional approaches (particularly econometric and social psychological) in natural resource management, to more recent emerging discursive approaches to the science of valuation.

The authors argue that, while resource management institutions have continued to use traditional, positivistic methods of valuation (those that rely on “social facts” and a monistic approach to values), the contemporary world has changed dramatically. The so-called “postmodern condition” and the associated rise of the public sphere has forcefully challenged foundational elements of natural resource management (for example, the definition of “resources” and the structure/role of bureaucratic legitimacy; the role of “science” in influencing allocation decisions; and the practices of public involvement). As a result, resource-based conflicts and controversies cannot be resolved under current, historically-based, management practices. Thus, new approaches to valuation are needed.

Discursive approaches, derived from new theories of society and modernization, are presented as a solution. These approaches feature the social practices of an engaged, pluralistic citizenry involved in communicative actions that ultimately enlarge the decision spaces of natural resource management and facilitate more positive social outcomes and resource management options. *(add a theory sentence here)*

This book is timely and important because it recognizes the dilemmas of valuation in post-utilitarian natural resource management practices, and it raises theoretically-based discursive solutions to address the problems. The social critique in this book will sensitize readers to the importance of the public sphere in natural resource management, planning, and policy-making, and will offer suggestions for how to reform valuation processes in resource management. Because valuation processes are at the very heart of resource management practice, our ultimate goal is to stimulate change in the practices of resource management.

2. Characterizing the Book

The book proposed here analyzes contemporary theories of social change and modernization to develop and apply discursive approaches to natural resource management problems. As such, it sheds new light on current issues and controversies in resource management, while also offering theoretically-based alternatives for reforming management practices. In two parts, the book presents a basic theoretical overview in Part I, and then in Part II applies the proposed model – discourse approaches – to three specific contexts in resource management. Throughout, the authors use vignettes and examples to illustrate the discursive character of valuation in natural resource conflicts.

3. Audience

Our primary market includes three groups: academic researchers, natural resource professionals, and graduate and advanced undergraduate college students. Among academic researchers, the book will be of special interest to those involved in teaching and research about public land use and management, outdoor recreation, and park and forest management. These faculty members typically work in schools of natural resources or departments of forestry, recreation, and park management. Additionally, faculty working in social science programs that have a strong environmental orientation (for example, in some rural sociology, public administration, and public policy programs) would also constitute a potential audience. Graduate

and advanced undergraduate students studying in all the programs identified above are also members of our primary market, as we expect this book to be adopted as a secondary source in some of their classes.

Resource managers working in public lands management positions (outdoor recreation planning, park and forest management), as well as policy and planning employees of the federal and state resource agencies, are also targeted. These agency employees are faced with intractable problems in agency/public relationships, and our book speaks to those kinds of problems and suggests discourse-based solutions.

Secondary markets include a variety of groups and individuals engaged in planning and policy positions and who are attempting to develop new models for planning process. These include members of local, regional, national, and international environmental organizations, and also members of non-governmental organizations (land trusts, watershed organizations, community development organizations, city planners, and foundations such as the Pinchot Institute and Conservation Studies Institute of the National Park Service). These audiences are engaged in working out new kinds of institutional relationships that involve planning through public engagement, a central idea in our book.

As noted above, we expect the book to be used as a supplemental text in university courses. Some of these courses include the following: natural resources planning; environmental policy; park or forest management; social dimensions of natural resources; environmental economics; natural resources communication; rural and resource-dependent community development; and public involvement and citizen participation.

Relative to bulk sales, we suggest contacting federal and state land management agencies (U.S. Forest Service and National Park Service, Parks Canada, and international agencies). Possibilities for bulk sales also are available through social science and natural resource management conferences the authors attend, including meetings of the International Symposium on Society and Resource Management and annual meetings of the Rural Sociological Society, among others.

4. Topics

The following topics are addressed in this book:

Social change and theories of modernity; reflexive modernization
Social values and theories of valuation
Discourse and discursive approaches to social action
Importance of the public sphere
Post-utilitarian natural resource management
Role of science (and public understanding of science) in natural resource management and decision making
Natural resource planning and public participation
Implications for research in valuation and discourse

5. Origins of the Book

The work presented in this book has been supported by USDA Forest Service research funding since 1994. Initial development of the ideas occurred during an ecosystem management project supported by the Northeastern Forest Experiment Station in Vermont; later iterations were supported through the resource valuation research program of the Rocky Mountain Research Station in Colorado. This idea of a book emerged from two conference sessions organized by the authors around the topic of “values in resource management” and presented at the 2000 and 2002 meetings of the International Symposium on Society and Resource Management. Our papers at those sessions garnered widespread audience interest, but were not published. Subsequent requests for copies of our conference papers led to discussions about producing a book on this topic. The process of writing the book has been a collaborative venture. Though each co-author has had initial responsibility for specific chapters, we intend to collaboratively edit and revise all

chapters before submitting the final manuscript. Our goal is to produce a volume that represents a “seamless whole,” and we are attempting to achieve consistency in content and style across all chapters.

6. Related Books

Our book draws from and integrates a variety of social science and natural resource management literatures. It is unique in its efforts to address issues of how contemporary social theory contributes to new approaches of valuation and how those new approaches might profitably advance natural resource management. We do not know of another book that provides such a detailed theoretical analysis of social change, broadly addresses valuation processes (rather than “values”), and focuses on an array of natural resource management examples. Moreover, as a co-authored volume, this book sustains a coherent argument across all chapters.

We have built on existing published literature in the areas of discourse theory, social theories of modernity, valuation processes (particularly economic valuation methods), public participation in natural resource management (and resource planning more generally), and discursive methods of planning. Some of these earlier works might be seen as competitors to this volume because they address portions of our topics or related topics. Of these, the books that might be seen as direct competitors include the following:

Include author, publisher, and date of publication. Briefly: What are their strengths and weaknesses

Walker and Daniels

Fischer, F. 2000. Citizens, Experts and the Environment: The Politics of Local Knowledge. Durham: Duke University Press.

Renn, O., T. Webler, and P. Weidemann (eds.). 1995. Fairness and Competence in Citizen Participation. Boston: Kluwer.

Williams, B. and A.R. Metheny. 1995. Democracy, Dialogue, and Environmental Disputes: The Contested Languages of Social Regulation. New Haven, CT: Yale University Press.

7. Length

We expect to produce a manuscript that is 400 – 500 pages in length.

8. Manuscript Components

The manuscript will primarily be standard text; summary charts, graphs, and tables will be used sparingly for illustrative purposes. Text sidebars will be used throughout the text to describe and elaborate important cases and examples. The authors will attempt to index the work and will create an author and subject bibliography. We are debating the merits of including a glossary of terms.

9. Production and Design

At this stage, we are still thinking about the topics of appropriate colors, graphics, and cover design. We likely will not have photographs in the text, but may wish to consider photos for the cover. We would like to discuss production, design, and marketing with editorial staff.

10. Potential Reviewers

Add titles and affiliations

David Bengston – Natural Resource Economist – North Central Station USFS

William R. Freudenburg – University of California, Santa Barbara

Hannah Cortner – University of Arizona

Margaret Shannon – SUNY Buffalo

Bjorn Kaltenborn – Norwegian Institute for Nature Research

Brian Torode – Trinity College, Dublin

11. Completion Date

February 1, 2003	Part I drafts completed; meet to review and discuss Part II chapters
May 15, 2003	Drafts of Part II chapters completed; meet to review all and write other sections (introductions to parts, concluding chapter, etc.)
August 15, 2003	Book draft complete; deliver to publisher

Towards a Post-Utilitarian Resource Management

The resource management enterprise is eyeball deep in a vexing state of social transition. Some commentators complain of managers being caught in a crossfire of social conflict (e.g., Salwasser 1991). Others characterize contemporary resource conflicts as “wicked problems” (CITE) or societal “train wrecks” (CITE). All would agree that the volume of conflict over natural resource issues has risen, and the tone of debate has grown increasingly contentious. The resource management profession has not remained passive in its response to social change, simply retreating to its fortress of bureaucratic procedure after each public beating. Instead the profession has actively attempted to forge new ways of doing business. “New Perspectives Forestry” in the late 1980s morphed into ecosystem management in the 1990s, and today has become integrated resource management, which aspires to a goal of hybrid knowledge (CITE) through an interdisciplinary team-based approach to problem solving. The concept of sustainable development, with its dual goal of biological integrity and vitality for human communities, has become the new currency of management success. To achieve this goal, managers are experimenting with techniques of “adaptive management,” and struggling with mechanisms that facilitate collaborative decision making involving competing “stakeholders” in formalized public participation processes. In short, the resource management profession is experiencing a transition from its utilitarian roots, based in the progressive commitment to scientific management (e.g., Pinchot 1947, Van Hise 1910) and its “gospel of efficiency” (Hayes, 19XX), to a post-utilitarian condition that aspires to an integrative biocentric vision of biological and human communities.

But do these efforts at a post-utilitarian resource management profession really represent a significant break from its utilitarian past? Does integrated resource management really produce a new and better set of inputs into decision making, or does it simply expand the analytical

complexity in an attempt to match the complexity of contemporary resource problems. Do “reinventing government” initiatives designed to make resource management agencies operate more like businesses provide more efficient and streamlined management procedures, or do they simply force more management accountability in lean market conditions? In other words, has resource management responded to the contemporary contours of social change with innovation and critical self-analysis to forge a post utilitarian profession in step with contemporary society/environment relationships? Or, has resource management responded to contemporary social change with managerial variations to the familiar principles and methods from its utilitarian past?

In this book, we argue that the contemporary resource management response to recent contours of social change is an enhanced version of progressivism, and consequently is not well synchronized with the contours of recent social change. In contemporary resource management frameworks, the primacy of science, efficiency, and the technical expert go unchallenged, and the “greatest good” principle is institutionalized in a professionalized goal-directed, problem solving culture of management. Contemporary resource management perpetuates the quest for scientific certainty and cause-effect relationships within the context of systems based models, and thereby rarely step outside of the comfortable confines of progressive instrumental rationality.

Yet, instrumental rationality cannot easily accommodate the symptoms of contemporary change. Instrumental rationality relies on scientific certainty, but the contemporary legacy of scientific and technological innovation has been an expanding horizon of risk (Beck 1992) and ambivalence (Bauman 1991). In the risk society, the goal of resource management shifts from “the greatest good for the greatest number for the longest time” to a goal of “the least harm to the fewest people for the shortest time.” With this expanding horizon of risk comes greater

uncertainty and ambivalence. The scientific expert can no longer claim the last word, as public debate over resource issues has become more stridently vocal. From a progressive perspective, this argumentative society is a negative force of change, where polarized debates and radical relativism thwart productivity and progress. There is a growing view, however, that the argumentative society is the central feature of contemporary change that signals a new “communicative rationality” (Habermas). Communicative rationality embraces the ambivalence of contemporary existence and gives primacy to deliberation and argumentation in everyday life. Resource managers today have little difficulty in understanding the ambivalence of modern day resource conflict and decision-making moments. Nevertheless, the instrumental rationality of progressive solutions offer little guidance for understanding and dealing with resource management problems in a society that has shifted from compromise and acquiescence for the greater good to a society of pervasive diversity and persistent argumentation. In this book, we outline a version of resource management based in discourse theory, which we believe provides a better fit with the contours of contemporary social change. [PROBABLY NEED TO ELABORATE THIS LAST SENTENCE.]

From Progressive Certainty to Post-Utilitarian Ambivalence

Under the confident leadership of Gifford Pinchot, the resource management profession in the United States launched the 20th Century with a strong progressive vision for scientific management and professional stewardship of the nation’s natural resources. The story of progressivism is firmly entrenched in the lore of the North American conservation movement. Outraged at the excessive exploitation of the nation’s natural resources - the “great cutover,” the market hunting era, wetland conversion, and soil depletion - people such as George Bird

Grinnell, Gifford Pinchot, and [HOW ABOUT A 3RD NAME?] forged a vision of social progress where resource management sought to meet the resource needs of a growing U.S. economy, while ensuring a continuous supply that would also meet the needs of the future. To achieve this vision, management was built on a foundation of scientific enquiry and technical expertise that developed techniques to maximize output while ensuring the continued viability of future outputs. This sustained-yield philosophy, along with its production mentality of efficiency, served the resource management enterprise well through much of the 20th Century, and produced a legacy of professional service and organizational infrastructure that has become an integral part of American identity.

In the closing decades of the 20th Century, however, the energy and certitude of the progressive ideology has waned and the once sparkling vision of management efficiency and technical expertise has become dim. The “gospel of efficiency” is repeatedly challenged today. The science of silviculture (DAN, IS THIS THE RIGHT SCIENCE?) has allowed forest managers to maximize the output of board-feet per acre, yet many people today oppose the even-aged, single-species techniques of production that have been forged by decades of experimentation. The science of population dynamics has allowed wildlife managers to either increase or sustain the supply of game species for its hunting, trapping, and fishing clientele. A growing number of people, however, object to this consumptive bias and are demanding an expanded focus on non game species and integrated ecosystem approaches to wildlife management. The species success stories (e.g., deer and Canada Geese) are also creating their own set of vexing problems such as agricultural damage, disturbances in urban and suburban areas, and health issues (e.g., Brucellosis and Chronic Wasting Disease). [SHOULD WE OFFER ANOTHER DISCIPLINARY EXAMPLE HERE? - SUCH AS WATER OR SOIL?]

The technical expert also is no longer afforded the last word in resource management issues. Clearcutting an even-aged, single species stand of trees may be the most efficient technique for producing timber, but the practice is increasingly rejected by a growing number of recreational advocacy groups. Just as the British government assured its citizens in the 1980s that mad cow disease could not be transmitted from cows to humans, wildlife experts today are saying that there is no evidence to show that Chronic Wasting Disease can be transmitted from deer to humans. In Wisconsin, the hunting public seems disinclined to believe these claims. When dairy scientists pioneered bovine somatotrophin (BST), or the growth hormone that stimulates milk production in cows, they were dismayed at the public backlash. There science trained them to develop efficient methods of production, and the public protest rejected that science.

In short, the utilitarian foundation of progressivism, with its focus on the science of natural resource production, is no longer given free licence. The empirical certainty promised by scientific resource management has been elusive, and the way forward today is increasingly contentious and infused with ambivalence. The overriding goal of economic progress served the resource management enterprise well through much of the 20th Century, but the risk consequences of scientific management are becoming more apparent. What are the social impacts on rural areas from an exclusive dependence on timber extraction (Humphrey et al 1993)? What is the risk of disease transmission between wildlife and humans? What are the costs of wilderness designation and are those costs absorbed equally by all parties? With these types of questions, managers spend more time asking how to minimize risk and less time how to increase production. It is issues like these that question the singular utilitarianism of resource production, and cast debates into an environment of uncertainty. From the view of the early 20th Century,

scientific resource management offered a horizon of opportunity. From the view of the late 20th Century, it is the many achievements of scientific resource management that have generated an ever-expanding horizon of ambivalence.

Consequently, many have pronounced the progressive era in natural resource management as dying if not already dead. The societal consensus that once existed for multiple use utilitarianism has dissipated leaving managers with no clear mandate (Freemuth, 1996). From right to left, the many observers have been busy writing epitaphs for Pinchot's progeny, the federal land management agencies (Sedjo, 2000; Nelson, 2000; 1995; 1996; O'Toole, 1997; Kemmis, 2001). While such eloquent voices of decline echo from all quarters, there is far less clarity and accord about the way forward. Public natural resource management has surely entered a "post-utilitarian" era, but like so many post-isms, it is far easier to survey the landscape left behind than to confidently chart the terrain ahead. And contemporary debate over how natural resource management will be reborn is having a difficult time turning its focus from that landscape left behind.

Certainty and Ambivalence: The Resource Management Response. Resource managers working inside the public institutions have little time for sorting through all the analytical prescriptions for the post-utilitarian age. They are too busy responding to the daily battles of an increasingly contentious public, with its interminable conflicts over planning and decision processes. But in addressing those daily battles, public sector natural resource managers have clung precariously to the withering remnants of technocratic utilitarianism. They have attempted to refurbish the old creed with economic optimization methods, and later, new and more integrated scientific models (e.g., ecosystem management) that they hoped would better withstand technical scrutiny. They have latched onto private sector management techniques in

hopes of enlightening misinformed stakeholders and mediating conflicts, in an anxious attempt to sustain their management foundations. But these methods and management techniques fit poorly within the contours of contemporary social change. They make the same utilitarian assumptions about the rationally acting individual, operating in a systems-based world of function and causality. The assumption of a functionally ordered world of progress, however, carries less resonance when faced with contemporary risk technologies and the predatory forces of globalization. In this contemporary environment of uncertainty, argumentation and deliberation is thrust into the forefront of human affairs. And the instrumental rationality of the progressive era does not deal well with this emerging form of argumentation or “communicative rationality.”

What are the specific resource management responses to the contours of contemporary social change? We argue that there are at least 4 primary strategies used by the resource management profession to respond to contemporary challenges that focus on 1) the science of social values, 2) the science of persuasion and educating the public, 3) incorporating business, accounting, and marketing practices into resource management, and 4) integrating natural sciences with social sciences. None of these responses is discrete, as management agencies may incorporate pieces of each. Additionally, there are other variations or alternatives to what we outline here. This list is only intended to illustrate the disconnect between progressive utilitarian strategies and contemporary conflict.

If there is a common thread running between these different strategies, it is the concept of value. Social values have provided perhaps the most popular link between management’s biological heritage and contemporary calls for a more integrated approach to resource management. When using the concept of value, however, management scientists have not strayed from the concept’s utilitarian roots. Management science has either treated value in an economic

sense where value inheres in the supply/demand relationship of a public good, or in a social sense where values are collectively held as mechanisms for maintaining social order. Either approach seeks to generalize stable human responses and establish predictive certainty to the way the public approaches resource-related issues. We argue that these recent efforts at an integrated resource management feature a utilitarian approach to value that fits poorly with a post-utilitarian society, which is making uncharted demands on resource management agencies.

If the instrumental rationality of utilitarianism is giving way to a communicative rationality of post-utilitarianism, then values are better characterized as arguments. To evaluate an object, one must construct a logic through language that necessarily implies one or more counter-logics that could be used in evaluating the object. Holding a value means that one reconstructs the logic of an evaluation discursively, repeating and refining that logic against inevitable counter claims. Values, in a post-utilitarian society, are dynamic communicative expressions that reflect the way individuals engage with the ambivalence of contemporary existence. Utilitarian approaches to value feature assumptions about stability and certainty of human cognition and behavior. A discursive approach to value fits better with contemporary assumptions about rapid social change and ambivalence. In the remaining pages of this chapter, we will outline resource management responses to contemporary social conflict, critique the cognitive bias inherent in utilitarian approaches to social values and management responses, and offer the foundation of a discursive approach to social values and resource management.

A Utilitarian Post-Utilitarianism? (Or What Bugs Me About SNR:)

Science of Social Values. Perhaps the most common initial diagnosis of social change among resource managers is the observation that society's values have changed (CITE, CITE).

Resource management in its early decades of the 20th century reflected society's progressive values: a sustained yield of resources to ensure economic growth, an improved quality of life, social welfare, and a leisure industry based on self-development and improvement. Nurturing the quality of the natural environment through scientific resource management was an essential component for progress in American society. That progressive notion, many argue, has become diluted by a cacophony of new voices making claims on the nation's resources. These voices reflect an expanding array of new and different values and value systems that often make conflicting demands on existing management programs, and which often require responses that lie outside traditional domains of managerial expertise.

For example, the wildlife management profession was a direct outcome of the progressive movement in the late 1800s. Alarmed at the massive scale of wildlife exploitation during the market hunting era, wildlife managers institutionalized their enterprise by developing a regime of harvest controls: closed seasons, bag/creel limits, and age and sex limits. Aldo Leopold professionalized wildlife management by establishing the first university department of wildlife management, and wrote the first definitive text (Leopold, 1931) that codified scientific management principles: Game Management. His book, like the wildlife management profession in the first half of the 20th century, was almost exclusively focused on the sustainable production of game species. Wildlife management during this time reflected values for meat, furs, and recreational sport-hunting and fishing. Many today argue that these values have changed (Decker et al., 2001). Many forces within society are demanding a non-game focus in their state and national wildlife management agencies, which reflect aesthetic values, ecological values, and existence values as alternatives to traditional consumptive wildlife values. Similar stories could be told throughout the resource management profession. "New Perspectives" forestry in the late

1980s was a management response to social criticism of even-aged, single-species practices of forestry. The New Perspectives movement, which was a forerunner to today's ecosystem management, was an attempt to alter forestry practices in a way that recognized similar aesthetic values, ecological values, and spiritual values. These new social values put less emphasis on maximized output of board feet, and more emphasis on non-market outputs provided by forests.

In each case, managers have solicited social science to identify the new and expanding array of values that society holds towards natural resources. Inherent in this appeal is the assumption that if managers can identify society's value, they can then do a better job of mediating conflict and providing a wider array of benefits from the public domain. Management science draws from a variety of research techniques including, but not limited to cost/benefit analysis, contingent valuation (for non-market goods), and a variety of value inventories from social psychology. The quantification of society's values through a monetary metric or a psychometric offers a degree of empirical certainty to the value orientations of stakeholders, which can then suggest policy and management alternatives. Yet, these research methodologies are firmly entrenched in utilitarianism, and seek conclusions about the stable characteristics of individual behavior. Without constant monitoring and replication, these methods offer little information about change. Consequently, if contemporary society is moving toward a discursive society subject to rapid and continual change, the management prescriptions offered by these utilitarian methods may have a short "shelf-life," and may be inadequate management models when dealing with social conflict.

Educating the Public. A second common management response to the pressures of contemporary social change is a renewed call for more public education about the environment. This prescription relies on management's progressive heritage because it aspires to give science

and the professional expert the last authoritative word in resource debates. It is based on a fundamental assumption of environmental realism (McNaughton & Urry 1999), where the physical properties of the natural world and its functional patterns of cause and effect can be known through systematic observation. Positive methods of scientific observation are the best, if not only way to uncover the systemic nature of the physical world and to understand why the natural world “behaves” as it does. Therefore, management needs science to guide decision making, and relies on the technical expert who has a more thorough and informed knowledge of natural diversity and its interrelated processes. The knowledge generated by scientists becomes the currency of the management enterprise, and agencies claim legitimacy among the public by assertions of objectivity in their use of a scientific method. So, public education has been an important task of resource managers since the beginning of the Progressive era. This is not to suggest that environmental education is the handmaiden of management science. Environmental education is a sub-discipline in its own right, and employs a variety of teaching and communicative techniques representing competing approaches to learning and knowledge. But in resource debates, managers characteristically retreat to the comfort of the scientific method, and call for strategies of outreach and communication that will present the “facts” to an uninformed or misinformed public. They also use scientific findings to arbitrate between competing value orientations in controversial public debates.

This “educating-the-public” approach to resource controversies and public debates walks a fine line between education as a method of inquiry and education as a persuasive activity. For example, were Ding Darling’s 1930s editorial cartoons efforts to educate the public about how the sod buster and swamp buster policies of the Roosevelt administration were destroying wildlife habitat, or were they partisan criticisms of New Deal, Depression era political policies

that wildlife biologists thought might prove disastrous for waterfowl populations? In this case, as in many other resource debates, the space between fact and argument is unclear.

Today's resource controversies may differ from 70 years ago in the recent and incipient contemporary mistrust of science and its technological outputs. Society questions the "progress" achieved by 20th Century science, and is therefore less willing to give science the last word - particularly in resource debates. Consequently, management scientists have difficulty understanding public mistrust and a sometimes obstinate public refusal to believe the science produced. One management response has been to seek the expertise of social science to smooth the communicative path between the scientific expert and the lay public. In its crudest form, these appeals for understanding the "human dimension" of natural resources amount to little more than public relations prescriptions. In its more sophisticated form, these appeals draw from a 60-year research tradition in social psychology on communication and attitude change.

This research was pioneered by Carl Hoveland's studies of influence and propaganda for the U. S. Department of Defense during World War II. At the heart of his well-known Communication Program at Yale University, was an effort to study the systematic way people craft persuasive appeals and the effect those appeals have on the listener. The motives of this research team was to understand the "formula of *who* says *what* to *whom* with what *effect*" (Hoveland, Janis, & Kelly, 1953). There's was, in effect, a science of influence and attitude change. Participants in a discussion draw on a complex system of existing attitude orientations. Hoveland et al were interested in understanding the conditions under which individuals are persuaded to change pieces of that attitude structure. The earliest formulations of this research assumed that people are rational actors, where new information is integrated into existing cognitive structures, and either helps to crystallize one's beliefs, values, and attitudes, or forces

one to modify their thinking in some way. The speaker formulates claims and statements based on goals and outcomes they would like to achieve. The listener then hears these appeals, performs a sort of layperson's cost/benefit analysis, and then reasons according to the perceived implications of the statement.

More recent expressions of this research tradition have modified the rational actor or information processor model of human cognition. Recognizing the non-reflexive and sometimes intuitive nature of human behavior and interaction, Petty and Cacioppo (CITE) distinguished between the central and the peripheral route to persuasion. The central route was an elaboration of Hoveland's original formulations of attitude change and focused on the content of the persuasive message. The peripheral route, however, recognized that people typically do not have access to the full range and complexity of their cognitive structure in a discussion, and instead are apt to use cognitive short cuts, schematic dialogues, or heuristic devices in everyday interaction (Kahneman & Tversky 198X; Langer 198X). Consequently, people may often be persuaded by metaphors, stereotypes, familiar narratives, and a host of other simplifying devices of debate. Some even argue that it is the form of delivery that persuades - its forcefulness, conviction, or position of authority - rather than the content of the message (e.g., Moscovici 1984).

There is an emerging body of literature that has responded to resource manager's desire to understand these processes of communication and persuasion [CITE MANFREDO AND BRIGHT. ARE THERE OTHERS?] By itself, this is a valuable skill for resource managers to develop. Resource policy and management plans require skills of persuasion in their implementation. Yet, following its utilitarian heritage, the act of management persuasion in a public conflict is typically wrapped in the mantel of scientific objectivity and expert knowledge,

and then presented to the public as environmental education. Management feels it must “educate the public” because the public sits on the outside of the truth embodied in scientific knowledge that has been gathered by an army of dedicated scientists. Yet, increasing educational budgets and a growing professionalism among the environmental educators who work for agencies have failed to stem the tide of public conflict. There is, in this post-utilitarian world, a “crisis of science” where the public refuses to be easily convinced by the technical expert. Science can no longer claim the mediator role, which adjudicates over the competing value claims of different “stakeholders.” Neither can science claim the high road of objectivity. Instead, scientific findings very often are the object of debate. Therefore, a call for public education is a call for argumentation in disguise. Learning how to become more persuasive upholds the utilitarian legacy of resource management. But in the post-utilitarian climate, the public and the management profession will be better served by understanding the dynamics of discourse and argumentation.

Resource Management and Corporate Efficiency. A third typical management response to the forces of contemporary change is the agency move toward business-based management models and the incorporation of economic criteria of efficiency and accountability. Though the mechanisms of efficiency are derived from a contemporary culture of the corporation, the ideology or “gospel of efficiency” is little changed from the Progressive era. This new move toward economic efficiency and accountability is expressed in at least three ways. First is the move toward business models of resource management. One of the principles of the 1990s “reinventing government” initiative was to mimic the business world by “elevating” members of the public to the status of “customers” of government services. These services have also evolved into “goods” or “products.” The thrust of this new approach to management is to develop new

“product” for the increasing diversity of customer values.

If services have become products in this management climate, then day-to-day operations have become subject to business balance sheets. Consequently, funding is a second major focus of the “new efficiency” in resource management. No longer can agencies provide “free” public services at a drain to general government budgets. Instead, agencies must provide salable products, valued in the market place, that can produce a return on investment. In some cases, governments have mandated that resource management agencies be fully self-funding (e.g., Vermont State Parks and New Hampshire State Parks). In many other cases, however, these returns are subsidized by general funds. Nevertheless, the trend toward self-funding mechanisms (e.g., the U.S. government’s “fee demonstration” program) in natural resource agencies is becoming firmly entrenched in all levels of government.

If the issue of funding has become a defining focus of recent resource management efforts, agencies are confronted with the problem of pricing. Recreational experiences, clean water, aesthetic vistas, and existence value are products not typically traded in the market place. So the third focus of the “new efficiency” in resource management has been on techniques for non-market valuation - particularly contingent valuation techniques. In spite of the contingencies and limitations of contingent valuation first identified in the 1970s (CITE, CITE), the outputs from this research, which offer an intuitive prescription for management funding policy, are still in high demand. Non-market valuation research has also developed a variety of forced choice methodologies to establish product preference and demand (CITE). Ecological economics has even attempted to place a dollar value on ecological services provided by healthy ecosystems (carbon sinks, CITE OTHERS), with the goal of demonstrating how sustainable environments contribute to global economic well-being.

This appropriation of economic and business models into resource management is not without its own ambivalence, which is particularly centered around the concept of value. For example, to develop a business-like, customer-friendly approach, one natural resource agency recently hired a Fortune 500 marketing expert for technical guidance and counsel. The first few meetings between this consultant, robed in the finest vestments of any on Wall Street, and the assorted agency personnel, modestly adorned in boots and bolo ties, were spent learning the language and ways of the others' worlds. In one early meeting, the marketing guru was stressing the importance of collecting systematic data on customer preferences and values as the foundation of a good marketing plan. Noting that face-to-face interaction with customers was increasingly valued within the organization, several employees interjected that local managers are expected, even required, to use small-group, informal meetings and conversations to get to know and understand their customers. The consultant was aghast that such irregular and unstructured dialogue, using statistically unrepresentative samples of customers, was a required and even preferred method of learning about "customers" and their desires and values. To the marketing expert, it was inconceivable that such an approach was viewed as superior to scientifically assessed public opinion, and only reinforced his disdain for the bureaucratic inefficiency and irrationality of government. At this point, having noted that the consultant had studied with the Daniel Yankelovich, high priest of public opinion research, one insolent agency employee suggested the consultant refer to Yankelovich's book Coming To Public Judgment for an explanation as to why "conversation about values" was necessary and in some ways superior to the kinds of consumer assessments typically prescribed by consultants from the "cult of technical control" (Yankelovich, 1991). This story illustrates that the efficiencies of a business marketing perspective, with its singular approach to economic value, are often at odds with

resource management's mandate to talk to the public and become engaged with its more complex system of social values.

Similar difficulties arise when juxtaposing agency goals to provide products that meet a diverse set of values in society with agency efforts at fiscal responsibility - i.e., funding mechanisms. One of the more rapidly growing areas of resource management research has been on leisure and ethnicity, showing different rates and patterns of participation and different experience expectations among people from different ethnic backgrounds (CITE, CITE). To accommodate these different styles of leisure, managers must plan for opportunities that serve an increasingly diverse clientele. Yet, funding programs may have a built in mechanism that excludes people based on socio-economic status (More & GUY FROM UMASS). More and UMASS present data showing that recreation fees actively discourage lower income visitors. They argue that funding schemes violate the original agency mandate to ensure equal and democratic access to the benefits and services of the public domain. Therefore, do criteria of economic efficiency adopted by resource management agencies systematically exclude the uses and values of certain potential "customers?"

Integrative Resource Management. The fourth management response to contemporary change, and what in 2003 is perhaps the most current response, is to integrate natural with social sciences in research and policy making. Historically, resource management has been driven by the biological sciences - i.e., Pinchot's influence on forestry and Leopold's influence on wildlife. Social science throughout much of the 20th Century was on the outside, and rarely allowed into the discussion. And, even when it was allowed into policy debates, there were no efforts to make management plans or policies integrative. Social science in this context was more often used as a tool to assess and deal with public response to management plans or initiatives - at best, a form

of public opinion input, and at worst, a top-down public relations effort. Overall, scientists in resource management agencies have been trained within academic disciplines and rarely stepped outside of those disciplinary world views.

As public debate over resource management issues has become increasingly contentious, however, agencies have become more deliberate at incorporating social science into policy and decision making. An increasingly diverse and argumentative society calls for more sophisticated knowledge about social processes and their relationship to natural resources. Programs such as “new perspectives” forestry, “quality deer management,” and ecosystem management have moved beyond a focus on maximizing production of single commodity species to a focus on communities or ecosystems and their human interface. But, simply hiring more social science experts to augment the biological work of resource management agencies was not enough. More recently, the invigorated inquiry into the human dimensions of natural resources has been accompanied by a call for an integrated analysis of social and biological process.

The variation in these integrative efforts is substantial. At one end of the continuum, integrative efforts might be characterized as multidisciplinary, following the logic of the environmental impact statement. Different teams of disciplinary experts come together over a common issue or problem. Each team works within its disciplinary boundaries, they produce data relevant to the common theme, and then the results are collated into a document that reflects the distinctive questions, methods, and outcomes of each discipline. At best there may be some integrative work reflected in a summary chapter, that attempts to draw linkages and implications from the disciplinary findings. At worst, the separate findings are simply stapled together as a statement of additive knowledge. The strength of multidisciplinary research and management lies in its efforts to marshal a broader than normal diversity of expertise and perspective. The

challenge, however, lies in the fact that the coherence of the prescriptive findings are only as good as the cross-disciplinary communication that is, or is not built into the process. And career rewards for multidisciplinary collaboration tend not to be a part of the scientific or management enterprise.

At the middle of the continuum, integrative work might be characterized as transdisciplinary, where practitioners claim a disciplinary home, yet make tentative forays into the practice and methods of other disciplines. The integrative practice in transdisciplinary work comes in the efforts by collaborators to understand a shared problem through the lens of several different disciplines. This time and labor intensive approach requires significant communication between the parties to understand the method and world views of the others, with the goal of synthesizing a common plan for research and action. The shortcomings of disciplinary specialization in management policy look to transdisciplinary collaboration to forge an integrative action plan that synthesizes the most relevant and best pieces that each discipline has to offer. In short, innovative problem solving can be best achieved from the synthesis of multiple perspectives. While the principle may be sound, the execution, however, may be problematic. How much does one really need to know about the other disciplines, and does knowing a little about another discipline give one just enough knowledge to be dangerous? For example, does transdisciplinary collaboration qualify the fish biologist to competently administer a public opinion survey about fishing regulations? And when do disciplinary methods overwhelm the framing of the research questions and the outcomes of the research? Multiple perspectives may produce an innovative approach to a resource problem, but the collaborators must settle on a method, and those methods will most frequently come from established disciplines. Finally, can one go too far with the transdisciplinary ideology, shunning a disciplinary home, and embracing a

generalist role that dismisses disciplinary legacies?

Finally, at the other end of the continuum is the ideal of integration: interdisciplinary collaboration. Here, researchers and managers step outside of their disciplinary training to work in the spaces between established disciplines and their problem boundaries. The focus in interdisciplinary work is on problem solving that steps outside of the usual management and research definitions, and seeks to coopt the public in problem definition, planning, and problem solving. At the extreme, this approach tends to dethrone traditional disciplinary methods and questions to forge innovative approaches to problem solving that lie outside of traditional world views. Its goal, in effect, is to produce a hybrid form of knowledge derived from the interstices of conventional disciplinary traditions. The track record of self-proclaimed interdisciplinary efforts is the source of debate. To what extent have these efforts generated a new hybrid type of knowledge, and could this new information have eventually been generated by conventional methods? One might also ask a more troubling question: to what extent is interdisciplinary collaboration paying “lip-service” to the latest fad in resource management circles? [IT’S LATE IN THE DAY, I’M LOSING FOCUS.]

In each of these expressions of integrative research, however, none of them seriously challenges the progressive role of science in contemporary resource management. Integration encourages innovations in the scientific method, making appeals to disciplinary science to step outside its peer-review incrementalism and take an applied problem-based approach to inquiry. But the call of integrated resource management is the same call made by Pinchot - more and better science to meet the needs of a changing society and to accommodate the values of a diversifying society. Science, in a post-utilitarian age, however, is often the source of contention in current public debates over resource management. Instead of bringing more certainty to

society's understanding of the world, science is expanding the horizons of uncertainty, and thereby stimulating public debate and controversy. From a utilitarian perspective, this is bad news. More and better science may just be adding more fuel to the growing flame of contemporary conflict and polarized debate. From a post-utilitarian perspective, this is good news. More and better science is fueling the renaissance of an invigorated public sphere that is "recolonizing the life space" once controlled by modern bureaucratic procedure, a politics of power, and the culture of expertise.

From Instrumental Rationality to Communicative Rationality?

There is a reason these various attempts to reshape 21st Century resource management have clung to their progressive roots. Few would argue that the principles of scientific resource management have produced clearly recognizable results. The progressive legacy of rational planning that formalizes collective goal setting, cost/benefit analysis, scientific data gathering, informed decision-making, and outcome monitoring has produced increased outputs of goods and services, agency accountability, and a more responsive approach to environmental stewardship. These attempts to reshape resource management also demonstrate a good faith effort by agencies to be responsive to changing social conditions. So why are these contemporary efforts to alter the way agencies do business problematic? We argue that the fundamental assumptions and principles of progressive resource management are not adequate to deal with contemporary forces of change. These forces of change are revealing broader fissures in the fortress of progressivism, and the contradictions of scientific resource management are becoming more transparent. The methods of utilitarian management calls for an "intensification of rationality" (Murphy 1994). Yet, that this intensification, which is expressed in the scientific

enterprise, the institutional structure of agencies, and the consumptive patterns of society, is as often the source of environmental conflict as it is the solution. Far from adding more certainty, the intensification of scientific management is contributing to a broadening ambivalence about the human prospect. This trend raises difficult questions about the legitimacy of agencies that cling to status quo assumptions about progress and human improvement.

The Intensification of Rationality. The notion of an intensification of rationality is founded on Weber's notion of instrumental rationality. Weber, in describing 4 ideal typical forms of rationality characterizes instrumental rationality as the pinnacle of modern social development. This form of rationality has driven the transition from traditional societies to modern societies. It is based on a belief in the power of knowledge as the engine of human affairs, and on the assumption that individuals can "master all things by calculation." Weber's epistemology provided a theoretical foundation for contemporary cognitive theory. For Weber the impetus for calculation was categorization. Humans live in a world of infinite complexity and are compelled to apply some organization and structure to that complexity through categorization. Categorization includes such processes as identification, ordering, causality, and function. The basic units of thought are values or the evaluation processes where one establishes a hierarchy of significance among the objects of one's observation. From this process, society collectively verifies a systemic framework to phenomena as a way to understand events of everyday life and predict future outcomes.

The hallmark of instrumental rationality is the rational acting individual. The rational actor uses one's knowledge about objects and relationships in the world to manipulate the outcomes of human action. From this knowledge of systems, individuals develop expectations about various outcomes that may arise from alternative activities. They then can establish goals

from this set of expectations, and purposely select behaviors that will best facilitate goal attainment. When the selected behaviors do not generate the desired goals, the rational actor can then reassess their strategies of goal-attainment in a way that modifies understanding of the systems in question. After this series of evaluations, the individual can then redirect behaviors toward a desired outcome or develop modified goal outcomes and modified behaviors. In this way, the rational actor is an everyday problem solver, working one's way through the uncertainties of everyday life by drawing on the cumulative processes of objectification and systems thinking. The concept of progress is implicit in this orientation. Goal-directed action that is instrumental toward achieving planned outcomes provides the most efficient and parsimonious means to a better condition - e.g., a better environment, higher output of goods and services, self-improvement, or an enhanced quality of life. In short, the promise of better future is the trademark of the progressive tradition.

The "intensification of rationality" in the closing decades of the 20th Century however, is revealing the limitations and contradictions of instrumental rationality in contemporary society. Murphy (1994) suggests that because of the intensification of rationality, the promises of progressivism have gone astray. This intensified rationality is expressed in scientific methods that originally promised technologies that could elevate standards of living and eliminate poverty and need. But science today has also produced technologies capable of manipulating the genetic make-up of life, and technologies capable of catastrophic destruction of all life forms. Intensified rationality is also expressed in capitalist markets. Originally, markets offered production efficiency, enhanced distribution, and consumer choice. But, markets have also added the inequities of concentrated capital with a global reach, which is forging a new set of animosities and conflict alliances. Finally, intensified rationality is expressed in the domination of

hierarchical bureaucracies, with their ever increasing degrees of juridical formalism. Over time bureaucracies have become bigger, and the inertia of their procedures and decision criteria become a juggernaut against local appeal. The tension between community governance and regional or national legislation has grown, and some would even say that the nation-state faces declining influence in the face of globalization pressures (CITE).

In short, the intensification of instrumental rationality has produced the risk society (Beck 1992). Environmental quality has declined at the hands of modern technologies, and increasingly high risk technologies impose global threats on the health and survival of all humans. Processes of globalization have opened up markets for capitalist enterprises, but the inertia of capital investment threatens to overwhelm the productive capabilities of underdeveloped parts of the world. This is creating new forms of economic marginalization, new animosities, and new alliances of resistance. The threat of global war did not end with the “war to end all wars,” but is upon us once more as established bureaucracies retrench in old notions of nationalism and hurl imperatives and threats at newly invented enemies.

With the cumulative development of instrumental rationality comes disorder - e.g., pollution, cancer, poverty and underdevelopment, fear, conflict. Albrow (1990) argues that the intensification of rationality brings the magnification of irrationality. For much of the 20th Century, instrumental rationality called upon its methods of planning and science to put out the fires of irrationality that periodically arose. If unintended consequences arose from incomplete knowledge, science could be marshaled to fill those gaps of knowledge and solve the periodic dilemmas of modern life. Today, however, this problem-solving mentality obscures the incompleteness of knowledge (Murray, 1994), and more importantly, obscures the broadening horizon of uncertainty produced by the methods of instrumental rationality. In the end, this has

produced a sort of methodological hubris in contemporary society. When society clings to the ideologies of efficiency and progress inherent in instrumental rationality, it ignores the growing uncertainties and ambivalences of contemporary existence that are themselves the products of rational planning and science.

It is just these ambivalences that are driving the growing contentiousness and public conflict over resource management issues. Calls for “more-and-better-science,” public education, business sector management techniques, or integrated resource management may help address local and immediate problems encountered in everyday management settings. But, they are not well-equipped to tackle the broader pressures of social change - where scientific findings are often the source of conflict rather than the answer to problems, where the public challenges agency legitimacy more frequently and more passionately, and where management initiatives become mired in endless opposition and litigation from unexpected and unimagined sources. [THE SECTION ABOVE IS A BIT MORE MELODRAMATIC THAN I HAD HOPED. BUT IN THE INTEREST OF MOVING FORWARD, I’LL LEAVE IT AS IS FOR NOW.]

Revitalizing Argumentation in the Public Sphere. The goal of this book is to sketch the outlines of what post-utilitarian resource management might look like, and to explore the implications for management agencies as they attempt to navigate through a growing climate of uncertainty and dispute. This task requires a theoretical and methodological framework that embraces contemporary ambivalence. The utilitarian framework that dominates progressive resource management has the opposite goal: conflict resolution through science and rational planning that chip away at the edges of the unfamiliar, the uncertain, and the disorganized. It seeks to transform random outcomes into predictable and controlled outcomes. In this book we contrast this utilitarian framework with a discourse framework. Discourse theory is untroubled

by uncertainty and conflict, and instead features deliberation, rather than progress, as its analytical starting point.

Weber laid the theoretical groundwork for a discourse framework. Whereas his analysis of modern forms of rationality at the beginning of the 20th Century ended with the concept of instrumental rationality, Habermas, Beck, Giddens and others argue for a transformation from an instrumental rationality to a communicative rationality at the beginning of the 20th Century. Contemporary society at the end of the 20th Century has achieved an unprecedented level of reflexivity, or critical reflection about itself. This reflexivity is the product of the intensification of instrumental rationality in the modern age. This intensification has produced globalized technologies of information exchange, an explosion of communicative networks, and a saturation of claims and nuanced counter claims in the affairs of everyday life. This cacophony of voices, or “multivocality” (Billig 1996) at all levels - global, national, regional, local, neighborhood, family, and individual - is challenging long-standing ideologies of progress, efficiency, and utility, and replacing them with the primacy of the argument. Society is losing faith in the idea of progress, as deliberation and argumentation become the contemporary engine of social change.

Weber also laid the conceptual groundwork for a discourse framework. His notion of value, or “practical evaluations of the unsatisfactory or satisfactory character of phenomena subject to our influence,” claims a deliberative quality to the valuation process. Weber’s phrase, “phenomena subject to our influence” gives away his focus on instrumental rationality. But in contemporary society, the question of influence has become the centerpiece of controversy and conflict. So, when the assumptions of instrumental rationality are stripped away, valuation as deliberation becomes the basic unit of cognition. Positivist notions of categorization and systems thinking take a back seat to emergent processes of argumentation and reflexivity in the

communicative society. In short, thinking is an ongoing argument waged within one's own head and waged in a social setting. This argumentative framework has ancient roots in Greek philosophies of rhetoric. Pythagoras's notion of logos and anti-logos held that any claim exists only in the context of its counter-claim. This concept helped structure philosophical rhetoric and debate over the centuries. But for our purposes, this idea is consistent with Weber's notion of valuation. Value positions only exist in contrast to their counter positions, and so values are expressions of ongoing debate and deliberation. So argumentation is at the heart of individual thought (Billig 1996, Myerson 1994) and social behavior. And it is the tension of argumentation that best describes the reflexive processes of contemporary society, and which produces the most potent impetus for social change.

We argue that resource management needs to rethink its commitment to rational actor models of human behavior, which are ground in the instrumental rationality of progressivism. We argue that resource management needs to reconsider its goal of consensus making through a science that "discovers the facts" and in so doing, signals the best course of action. And we argue that resource management should reposition itself in contemporary debates. No longer can they be considered neutral mediators. In its place, we will outline a resource management that accepts and works with a reflexive and communicating public, who evaluates and then acts in a climate of uncertainty and contentiousness. We will outline a resource management that no longer attempts to close off public debate with notions of empirical "truth," but instead embraces the science as a rhetorical tool, and at the same time expands its repertoire of argumentative methods and deliberative procedures. And finally, we will outline a resource management that begins to understand it can never take a neutral high ground in resource debates, but instead understands its position as one constituency or one perspective in public argumentation and the discursive

society. [WILL WE REALLY DO THIS IN THE END? PLUS, I FEEL I STILL HAVE SOME TROUBLE WRITING CLEARLY ABOUT DISCOURSE THEORY, SO ANY HELP WOULD BE APPRECIATED.]

In the ensuing chapters of this book we will: [NEED A SHORT WRITE-UP for each]

Chapter 2: Contours of social change chapter (WK)

Chapter 3: Theories of Social Values (WK with revision help from DW and PS on discourse section)

Chapter 4: Social Values, Discourse, and Resource Management (DW)

Chapter 5: Methods for mapping values in discursive story-lines (PS)

Chapter 6: Case study 1 (Aircraft overflight? - WK)

Chapter 7: Case study 2 (Land Trust? - PS)

Chapter 8: Case study 3 (??? - DW)

Chapter 9: Was there a 4th Case Study?

Chapter 10: Discussion, Conclusion (PS)

Contours of Social Change

This present day “crisis of science,” for many, is symptomatic of profound social change, where the social forms of modernity, driven by Enlightenment ideologies of individual autonomy, reason, and progress, may be giving way to new social forms, variously labeled post-modern (Cite), post-structural (Cite), or post-industrial (Cite). The “post” prefix on these words has been troublesome for social theory because of its negative definition of contemporary social life: that is, defining a social phenomenon by reference to what it is not. Even more controversial is the postmodernist assumption that patently new social arrangements are emerging that no longer fit the logic of Enlightenment modernity. The 20th century has brought changes that signal the “failure of the Enlightenment project of modernity” (Adorno & Horkheimer, 19XX) or even the “end of history” (Fukuyama, 1992). For some, contemporary postmodern change is equally momentous as the changes in Western societies brought about by the Enlightenment. But for our purposes, these theories are, first and foremost, theories of social change that challenge traditional frameworks and offer different ways of thinking about the social dilemmas of contemporary resource management. In this section, we outline the narrative of social change in the Frankfurt School’s critique of the Enlightenment project of modernity, discuss alternative accounts of the contemporary condition, and evaluate different prescriptions for contemporary social organization.

Autonomy, Reason, and Progress

Autonomy of the Subject. The broad and sweeping social changes encapsulated in the Reformation, Renaissance, and Enlightenment eras of Western history tell a story of

emancipation. These broad religious, cultural, and intellectual movements were expressions of a changing society: a transition of from feudal social arrangements to the development of modern social arrangements. These movements helped liberate the Western world from the shackles of feudal authority - religious authoritarianism, landlordism, superstition, and constant warfare - a condition of existence that, according to Hobbes' famous characterization of the Middle Ages, was "nasty, brutish, and short." Contemporary modernity is therefore a 400-500 year old project, whose "grand narrative" of progress grounded in profound religious, cultural, and intellectual transformations, replaced a rigid system of power and entitlement.

At the heart of these sweeping social changes was the emancipation of the individual, or the emerging "autonomy of the Subject" (Delanty, 1999). Individual life under feudalism was characterized by inflexible social relationships. Life was based on rigid structures of religious obligation, whose theology attributed causality in every day life to the threatening metaphysical powers of fate or divine intervention that demanded religious obedience and devout adherence to ritual and tradition. Life was also based on lopsided structures of political power founded on land tenure and militarism that demanded absolute loyalty and precluded individual expression or effectiveness. The concept of the autonomous self had no meaning in the Middle ages, and the role of individual action in everyday life had no bearing on the social forms inherent in feudalism. Even the individual within the nuclear family was less important as a form of social organization in an era when individual alliances were cast more broadly to include extended families, clans, and larger communal relationships.

So, the emergence of the self and the celebration of individual autonomy is perhaps the defining feature of modernity. The Reformation, according to Weber (19XX), liberated the

individual from the religious authority of the Catholic Church by insisting that individuals could have direct access to God through prayer, supplication, and worship. The emerging Protestant theology argued that discovering God's will did not require the mediation of a priest or the Virgin Mary to speak to God on one's behalf. For Weber, this theological revolution helped facilitate the rise of capitalism by its celebration of individual action as a demonstration of one's faith and devotion through steadfast work and righteous behavior. The Renaissance was the cultural expression of this new found autonomy of the Subject. Art, music, and literature found new forms of expression. In art, a new aesthetic of "high culture" emerged that shifted from symbolic expressions of religious or metaphysical themes to secular themes and depictions of realism in everyday life contexts. Music moved from its rigid monochronic chant institutionalized in the mass of the Middle Ages to become a more complex and highly codified aesthetic that moved out of the church and into elite and folk society. Literature blossomed into an expression of human emotion and heroic individualism. These transformations broadened cultural expression from an obligated devotion to religious power to a more distinctive expression of the individual eye, ear, or intellect; elevating the status of the artist from dutiful servant to seer and visionary.

Reason and Liberation. The most forceful expression of emancipation, however, came from the so-called philosophical architects of the enlightenment - most notably Descartes, Kant, and Hegel but also the British empiricists such as Locke, Berkely, and Hume and the continental rationalists such as Leibnitz, Spinoza, and later Fichte. Each of these philosophers, in different ways, championed the idea of human reason and rationality as the engine of social change. Descartes' "declaration of the Independence of Man" sought to shift the philosophical enterprise

from its centuries old focus on metaphysical “first principles” to a philosophy based on human reason alone. Following classic Greek philosophical concepts of truth, wisdom, beauty, and knowledge, St. Anselm best characterized a monastic philosophical tradition in the Middle Ages that situated the meaning of human existence in the sacred context of a “first mover, unmoved.” Descartes, in turn, secularized philosophy by insisting that the capacity for humans to think provided the only first principle needed for building an ontological and epistemological account of human existence. Kant’s “Critique of Pure Reason,” or critique of classic Greek notion of the purity of truth, elaborated enlightenment notions of reason by articulating categorical structures of the mind (e.g., time, space, causality CHECK THESE) from which knowledge claims are made and from which the ethics of human conduct are derived. From this foundation, the empiricist tradition routed metaphysical philosophy by locating “truth” in the material content of the world and by insisting that this “truth” could be known through individual observation and human reason. This philosophical legacy helped liberate individuals from the absolutist bonds and expectations of religious duty and its concomitant social tradition. In its place, this Enlightenment philosophical tradition established human reason as the foundation of knowledge and placed it at the center of history and human affairs.

Instrumental Rationality. If Descartes and the empiricist tradition emancipated the individual from the metaphysical world-view of the Middle Ages with its radical ontology and epistemology, Bacon and the ensuing positivist tradition energized the potential of human reason and rationality into a project of human progress and social innovation. Bacon’s was a teleological philosophy, or a philosophy of human action toward a goal. As a prophet of the autonomous subject, Bacon pointed the way out of the Greek and monastic philosophers’ focus on abstract,

speculative, and a-historical principles of pure truth, and unleashed the forces of instrumental rationality with its technological, political, and social innovations that radically transformed the Western world (Rorty 1985). His world-view was also one of the earliest “grand narratives” of progress. He states that “[t]he wisdom which we have derived principally from the Greeks is but like the boyhood of knowledge, and has the characteristic property of boys: it can talk, but it cannot generate...” (Bacon, 1860). Bacon conceived of knowledge and reason as a progressive project where history demonstrates ever-expanding and improving prospects for the human condition. In the same way, if Descartes and Kant laid the foundation of the modern project by privileging individual reason over abstract truth, Bacon set the project of modernity in motion by featuring the instrumentality or functionality of human reason as a means toward a desired goal.

The empiricist tradition [NEED SOME CITES], with its focus on the objectively observable reality of the material world, shifted the philosophical focus from Truth to function. The most salient feature of a knowable objective reality was that one could manipulate and improve one’s surroundings. The ability to manage and alter one’s surroundings through knowledge and reason not only liberated the individual from the past social and political obligations and restrictions, but it also served to emancipate humanity from nature itself, and opened the door to unprecedented innovation (Delanty, 1999) and ultimately the Industrial Revolution. The empiricists also elevated the verifiable “fact” based in objective reality as the foundation of its philosophy, and demoted the classical concept of “Truth” to the realm of subjective value without verifiable substance. Thus, the emerging “positive” sciences in the 18th and 19th centuries combined teleological notions of discovery, innovation, and human progress

with a methodological drive for factual certainty in a social environment of subjective ambiguity and doubt.

The social sciences were born out of this tension between objectivity and subjectivity, or the tension between facts and values. Disciplines such as sociology, psychology, and anthropology recognized that social phenomena were not simply randomly subjective expressions of human values or emotion. Instead, the social sciences recognized the systemic, and therefore predictable characteristics of individual behavior, social organization, and even traditional societies, and employed the tools of the scientific method to describe these regularities. The intellectual task of many of the earliest sociologists from Comte to Spenser to Durkheim was to elevate sociology as a science to an equivalent status as the natural science. Durkheim's insisted that sociology must treat "social facts" as things that are subject to the same scientific methods of analysis and prediction used by the natural sciences. Comte's fanciful "Great Society" [OR WHATEVER HE CALLED IT] championed the principles of scientific positivism and placed the natural sciences near the pinnacle of his organically functioning society of laborers, merchants, [ETC. GET OTHER CATEGORIES]. For Comte, however, the social scientists - sociologists in particular - should become the ultimate managers of society occupying the supreme position in the hierarchy. Spencer carried this notion of social engineering to its extreme by embracing the positivism of the natural sciences and championing societal management through objective reasoning.

Grand Narratives of Progress. Central to the emergence of the Enlightenment sciences was the notion of progress. Progress implied a historical movement from an earlier cruder state of existence to a contemporary more enlightened state of existence, where advances in

knowledge have produced clear improvements in the human condition. Large bodies of literature in philosophy, history, sociological, and elsewhere have been preoccupied with articulating a “grand narrative” of progress. Sociology in particular was a discipline founded on efforts to describe the course of social change and place social history in the context of progress. Earlier sociological theory borrowed Darwinian concepts to recount a history of social evolution. Töennies’ narrative about the social transition from conditions of *Gemeinschaft* to *Gesellschaft*, and Durkheim’s account of the transition from organic solidarity to mechanical solidarity [OR IS IT THE OTHER WAY AROUND?] both describe selection processes at work in societies that force traditional social forms to more modern social arrangements. If Darwin’s evolutionary processes were implied in Töennies and Durkheim, Spencer borrowed directly to construct a theory of social evolution. Spencer asserted that societies competed directly for limited resources, and the social forms that could most easily adapt to changing circumstances were the ones most fit for survival. The fundamental difference, of course, between Darwin and Spencer was that Darwin accented the stochastic nature of biological adaptation, while Spencer favored the social engineering, managerial nature of social adaptation. Spencer’s social evolutionary theory was motivated by a narrative of social progress and human improvement, but the implications of his social engineering framework foreshadowed 20th Century excesses and atrocities of modern managerialism, which stimulated the Frankfurt School’s early critique of modernity.

Two other prominent themes in sociological grand narratives have been 1) the transition from feudal and rural-based social forms to industrial and urban based social forms, and 2) the emergence of modern bureaucratic and political institutions of management given ongoing

technological and industrial innovation. Durkheim's classic *Division of Labor in Society* (CITE) borrowed concepts from economic theorists such as Adam Smith to describe a progressive specialization in the way societies produce the materials necessary for social reproduction. Implicit in Durkheim's narrative is that the process of labor specialization in contemporary industrialism generates an expanding productive capacity that in turn leads to progressive demographic, economic, political, and cultural development within societies.

Marx's interpretation of the transition from feudalism to mercantilism to industrialism was, of course, more critical. Nevertheless, his was the ultimate "stage" theory that elaborated progressive eras of social history where one social form of production necessarily gives way to the next stage because of its own internal contradictions. Marx's stage theory was based on Hegel's philosophy of historical change where progress was the product of the intellectual synthesis between claims about reality on the one hand and their inherent contradictions and counter-claims on the other. While Hegel resurrected a sort of Greek ideal about Truth and the "Idea" and insisted that reason was the engine of social change, Marx criticized Hegel's idealism and argued forcefully for the material foundation of social change. For Marx, the inherent contradictions of capitalism as expressed in the social relations of production (the material base) would force the working class to "throw off the veil" of their exploitation (the emancipatory role of ideology expressed in the "superstructure"), overthrow the "owners of the means of production," and establish a more equitable system of production based on need rather than desire. So, unlike most other sociological theorists who were observers of social change and progress, Marx offered a highly utopian vision of human progress.

Finally, Weber's narrative of progress mobilized the prominent themes of the Enlightenment to explain the march of technological and industrial innovation and the resultant forms of administration and management. He argued that the transition from feudal to industrial forms of social organization can best be explained as a historical development of different forms of rationality. In the first pages of his most influential book, *Economy and Society* (CITE), he outlines four "ideal typical" forms of rationality - emotion, tradition-based rationality, value-based rationality, and instrumental rationality - that parallel the developments of human history. Emotion based rationality provides the foundation of human action, derived from basic survival needs and elaborated in a set of normative responses to everyday events. Tradition-based rationality directs action through a codified and ritualized set of obligations to power. These first two types of rationality best characterized behavior in pre-industrial societies. Value-based rationality embraced the emergence of the autonomous enlightened individual who was liberated from the absolutist obligations of an authoritative church and feudal lord. Value-based rationality implies the emergence of a reflective ethics that can be known through reason and observation, rather than an absolute "Truth" handed down through the ages. Finally, instrumental rationality reflects the goal-directed and outcome based thinking that facilitated the emergence of positivism in science, industrialization, and managerial bureaucracies of contemporary modernity. Weber's narrative of rationality and human progress, in effect, synthesized the tension between idealism and empiricism (or materialism) into a theory that privileged the role of ideas and reason in human history, but which at the same time featured the material consequences of rationality and the way both are expressed in social change.

Civilization and the Empire. These Enlightenment philosophies and theories of social change and progress have not been insulated conversations between the intellectuals. Instead they have kindled very clear societal expressions during the last 300-400 years. Perhaps one of the best known grand narratives of progress came out of 19th century Victorian England when British colonial expansion was spreading across the globe. Some have attributed this imperial impulse to economic reasons: colonial expansionism provided a “vent for surplus” (CITE) or an outlet for capital’s perpetual drive to invest its profits in new and expanding markets across the globe. Nevertheless, this structural explanation does not go far enough. One cannot ignore the civilization ideology inherent in British empire-building. Simply stated, the prevailing British belief insisted that English society was the most advanced of any civilization in history, and that England had a duty to bring civilization to the less advanced people, to backwards societies, and to the “savage” people of the world.

There was a self-congratulatory tone to British colonialism when in 1840, England abolished slavery in its colonies, and Thomas Buxton in his famous Exeter Hall address called on the British people to embrace an “illustrious, noble and pure” ideal that would “give civilization and ...spread the mild truths of the Gospel” (to African people) through industry, agriculture, and commerce. While the Exeter Hall group’s approach to civilization advocated the rights of native peoples, others were less concerned with imperialistic consequences for indigenous populations. In his 1870 inaugural lecture as provost of Oxford, John Ruskin exhorted England and Oxford students to “found colonies as fast and as far as she is able, formed of her most energetic and worthiest men; seizing every piece of fruitful waste ground she can set her foot on, and there teaching these her colonists that their chief virtue is fidelity to their country, and their first aim is

to advance the power of England by land and sea...” Perhaps the most extreme example of imperial hubris came from Cecil Rhodes, who at the time of his death was colonial prime minister for what today includes South Africa, Botswana, Zimbabwe (formerly Rhodesia), Zambia, Malawi, and parts of Mozambique. In his statement of life goals, or his “Confession of Faith,” formulated in his mid twenties, he states that “...we are the finest race in the world, and that the more of the world we inhabit the better it is for the human race.” Later in the same document he asks “Why should we not form a secret society with but one object, the furtherance of the British Empire and the bringing of the whole uncivilized world under British rule, for the recovery of the United States, for making the Anglo-Saxon race but one Empire?”

This colonial legacy of spreading civilization is stamped all over contemporary natural resource management in sub-Saharan Africa. The Society for the Preservation of the Fauna of the Empire (SPFE) - today known as Fauna and Flora International - was founded in 1903 by British and American sportsmen interested in protecting safari game animals from the “animal slaughter” committed by “uncivilized” native peoples (Neumann, 1996). One early Tanganyikan game warden in the 1920s stated that “...the native has not yet reached the stage of civilization at which he is capable of appreciating properly the gifts of nature such as a fine game population and valuable timber forests - and of conserving them.” Even Teddy Roosevelt expressed this civilization ideology during his 11 month hunting safari through East Africa beginning in 1909 (Roosevelt, 1910). In describing the plains of Southern Kenya - what today is part of Tsavo National Park - he says “it is a white man’s country, a country which should be filled with white settlers...” (P. 126). And of the people he originally encountered, he states that “most of the natives are still wild pagans, and many of them are unchanged in the slightest particular from

what their forefathers were during the countless ages when they alone were the heirs of the land - a land which they were utterly powerless in any way to improve” (P. 14).

In the 1950s when African nationalist movements were gaining independence from colonial rule, expatriate game wardens and managers were concerned with the prospect of turning over wildlife management responsibilities to African nationals. Russell Train of the African Wildlife Leadership Foundation warned that “for better or worse, the future of most of Africa’s game country and the fate of its wildlife resources are in the hands of Africans themselves. Replacement of European staff by untrained, unqualified men spells disaster for the game.” The expansive system of African game preserves created by an empire building ideology today forms the backbone for an expansive system of game preserves, forest preserves, and national parks that continues to conflict with local interests (CITE). [THIS SECTION MAY BE EXTRANEIOUS.]

Progressivism, Science, and Natural Resource Management. It should be clear from its name that the Progressive era conservation movement, which laid the foundation for contemporary natural resource management in the United States, is one expression of a grand narrative of progress. While the civilization narrative of progress was beginning to wane at the beginning of the 20th century, a utilitarian narrative of progress based on pragmatic efficiency was beginning to take shape in the United States. The rallying cry of progressive conservationism was MaGee’s famous quote, often mis-attributed to Pinchot - “the greatest good, for the greatest number, for the longest time” (MaGee 1916). This statement contains a utopian aspiration for society and the natural resource profession. The progressive conservation movement arose on the heels of the populist movement in U.S. history, which sharply criticized

monopoly capitalists, land speculators, and the so-called “robber barons” of the late 1800s (Kolko, 19XX). The populist movement championed a diffusion of power and a broader distribution of societal benefits. So McGee’s quote incorporates the populist ideology by articulating a vision of progress where natural resource management democratizes and maximizes resource benefits for both current and future need - a demanding and perplexing challenge by any measure.

If McGee, the philosopher of Progressivism, drew from an Enlightenment narrative of progress, others (e.g., Pinchot 1947, Van Hise 19XX, ONE OTHER CITE) drew from the Enlightenment’s rationalist heritage to achieve the difficult goal of sustained benefit maximization. Pinchot, first and foremost was a prophet of scientific management of natural resources. Appalled by the waste evidenced in the “Great Cutover” under way during the late 1800s, Pinchot institutionalized a forest management system based in experimental science, and driven by a sustained-yield management goal. Forestry was based on utilitarian principles in its search for productive efficiency. It used the scientific method to discover and verify the systems-based assumptions of production and to establish its management protocol. In short the progressive era conservation movement privileged the formal rationality and logic of the scientific positivism and embraced the systems-based thinking of modern managerialism. This legacy is clear in today’s natural resource management profession. It is also clear in many contemporary resource management approaches to the concept of value. But contemporary challenges to Enlightenment concepts of rationality and progress are straining the efficacy of natural resource management.

Challenges to Progress and Rationality

Challenging the Grand Narratives of Progress. Has the Enlightenment legacy of reason, human evolution, and civilization lived up to its promise? Or have the contradictions of instrumental rationality brought the promise of the Enlightenment to its historical twilight? This is not a new question, unique to the debates about postmodernity over the last 40 years. From Marx's concept of alienation, to Lenin's critique of imperialism, to Weber's "iron cage," to Habermas' "colonization of the life-world," critical theorists and philosophers have issued warnings about, and raised challenges to the positivist and progressivist promise of Enlightenment rationality for more than 100 years.

On the surface, Marx's critique of capitalism was a critique of 19th century European industrialism, which he characterized as notoriously exploitive of the laboring class. Capitalism, as expressed in industrial forms of production alienated workers from the product of their labor - workers did not consume or use the product of their own labor, but instead exchanged labor for wages with an owner motivated to minimize labor costs. In 19th century capitalism, this led to exploitive working conditions, and political and economic power concentrated among a small minority of wealthy elites whose actions were dictated by profit rather than social welfare. For Marx, the rational control of nature, and subsequently control of the means of production, through technological innovation, alienated the masses by creating a system in which laborers could not accumulate wealth, and by centralizing power and decision making in the hands of a few. Although Marx's theory predicted a new stage of modernity (socialism), his analysis showed a clear discomfort with the expression of Enlightenment rationality in capitalism.

While Marx focused his critique on the conditions of capitalist production that are an expression of Enlightenment rationality, Lenin focused his critique on the ideologies of progress. Lenin's critique of imperialism laid bare the ideology of civilization as a benevolent and necessary impulse in colonial expansion, and showed the exploitive nature of imperialism that concentrated wealth and power in the hands of the colonizer and marginalized local people by destroying indigenous modes of production. Like Marx, he believed colonial exploitation would lead to revolution and a new form of modernity (socialism). Unlike Marx, however, Lenin drew on the assumptions of rationalism in his belief that revolution must originate from within the intelligentsia rather than from within the working class. Nevertheless, Lenin's analysis was a critique of grand narratives of progress (civilization). He challenged Enlightenment assumptions about human evolution by focusing on the corrupting forces of imperial and economic power.

Compared to Marx, Weber's theory of social change and his description of the bureaucratic structures of modernity possessed a more neutral analytical tone. But while Marx and other critical theorists were generally more bombastic in their analysis of the modernist characteristics of capitalism, they were also quite optimistic in their predictions for a new utopian-like social order. Weber, on the other hand, was pessimistic about the prospects of modernity. His famous "iron cage" metaphor predicted a "polar night of icy darkness" where corporations and state bureaucracies would confine decision-making and policy to a rigid form of instrumental rationality. The mechanization of production and the codification of management in bureaucratic procedure have reduced most forms of human interaction to means-ends relationships and have subjected individuals to a rigid form of functional determinism in their everyday lives.

“The order is now bound to the technical and economic conditions of machine production which today determine the lives of all the individuals who are born into this mechanism...with irresistible force...[T]he care for external goods should only lie on the shoulders of the ‘saint like a cloak, which can be thrown aside at any moment.’ But fate decreed that the cloak should become an iron cage.”

Weber’s observations were, of course, a response to an early form of industrialism, a similar type of exploitive industrialism that Marx was criticizing. While many 20th century theorists have elaborated Weber’s initial critique of instrumental rationality, they have attempted to do so without the technological determinism inherent in his theory.

Habermas, for example, elaborated Weber’s structural analysis by insisting on a distinction between the rationality of administrative and market systems and the rationality of the public sphere or the “life-world.” For Weber, the “iron cage” consequences of modernity were a mechanistic outcome of market production and bureaucratic organization. For Habermas, the progressive differentiation of productive and administrative technologies through the imperatives of instrumental rationality creates a specialized culture of expertise, whose internal logic and history separate it from other cultural spheres of knowledge and action. In modernity, the distance between expert cultures and the public sphere widens. In the process, the logic and discourse of these expert “high” cultures such as science, art, and literature become severed from the communicative action of the public sphere. A standardized bureaucratic logic and structure results binds people to reified ideologies, normative public opinion, behavioral expectations, and value orientations that exist beyond public discourse or effective protest. “The lifeworld is assimilated to juridified, formally organized domains of action and simultaneously cut off from the influx of an intact cultural tradition. In the deformations of everyday practice, symptoms of rigidification combine with symptoms of desolation” (Habermas 1984, p.326). Habermas

characterizes these outcomes of contemporary instrumental rationality as the “colonization of the lifeworld” or the “refeudalization of the public sphere.” For Habermas, the impoverishment of the public sphere in late modernity is hardly a symptom of progress.

The North American resource management legacy has also experienced a strong challenge to its narrative of progress. During the early years of the 20th Century, the Progressive Conservation movement facilitated a growing resource management bureaucracy based on an ideology of science. The excesses and abuses of resource management practices could be corrected by scientific management practices organized by legislative mandates and administrative oversight. The U.S. Forest Service was the outcome of uncontrolled logging practices during the “Great Cutover” era in the late 1800s. Wetland drainage and predator control schemes during the early 1900s helped motivate a system of wildlife refuges and eventually the creation of state wildlife management agencies and the National Fish and Wildlife Service. Aldo Leopold was motivated by similar observations to create in the late 1920s the first wildlife management department at the University of Wisconsin. The Dust Bowl years of the 1930s helped in the creation of the Soil and Water Conservation Service (today the Natural Resources Conservation Service), and also helped energize the cooperative extension service in the land grant universities. Each of these events in U.S. history helped professionalize resource management into a culture of expertise where allocation decisions were based on principles of scientific evidence and independent verification.

Throughout the first half of the 20th century North American resource management was based securely in Enlightenment principles of instrumental rationality. Cracks in the fortress of scientific management, however, began to appear in the 1950s with Rachel Carson’s warning

about the widespread ill effects of pesticide use on the landscape. This was followed in the 1960s by the catastrophic prophets such as the Erlichs (CITE), the Paddocks (CITE), and the Club of Rome (CITE) predictions of global disaster from overpopulation, resource depletion, global pollution, species extinction, and over consumption. These warnings about ecological calamity showed that the institutions and the expertise of 20th Century resource management had missed the obvious signs of environmental decline, and lacked the tools to deal with global risk and rapid ecological change. While many of these prophets of calamity held out hope that the coming catastrophe could be averted, the scope of their critique was radical and exposed the limitations of the progressive optimism inherent in scientific management.

Challenging Rationality. Not only did the historical evidence of the 20th Century challenge Enlightenment ideologies of progress, but the fundamental principles of rationality created an intellectual and cultural backlash of critique beginning in the late 19th Century. With the advance of Enlightenment rationality across the western world, and its material expression in patterns of industrial development and bureaucratic proliferation, an incipient paradox of modernity was emerging. The poet Hoffmannsthal wrote in 1893: “Today, two things seem to be modern: the analysis of life and the flight from life...” Kumar elaborates: “There was an urge to dissect, to understand all phenomena of nature and the mind in the most ruthlessly scientific way. At the same time there was a profound revulsion from this, an ‘instinctive, almost somnambulistic surrender’ to dream and fantasy, a desire to escape from the modern world” (Kumar, 1995, p. 99). This intuitive aversion to the alienating propensities of modernization instigated a longstanding critique of rationality, utilitarianism, positivism, and the managed

society that first began in the early 1800s with the philosophical writings of Nietzsche and Kierkegaard, but which received its first popular expression in Romanticism.

Romanticism pointed the way toward today's postmodern intellectual and cultural movements. As a philosophical movement, it captured the growing social enmity towards modernization by arguing that the development of European industrial society, based on Enlightenment tools of instrumental rationality, was no different from the patterns of development, stagnation, corruption, and decline of past civilizations (Voltaire, Rousseau, Hume). So instead of privileging Enlightenment principles of reason, objectivity, utility, and efficiency in everyday affairs, the Romantics sought to reinsert passion, imagination, and subjectivity in everyday life. The Romantic impulse of the late 1800s presented a utopian vision of humanity directly counterposed to the Enlightenment vision. "Reason was opposed by the imagination, artifice by the natural, objectivity by subjectivity, calculation by spontaneity, the mundane by the visionary, the world-view of science by the appeal to the uncanny and the supernatural" (Kumar 1995, p. 86).

This paradox of modernity is easily recognized in North America's resource management legacy. The Romantic heritage is clearly represented in the preservationist branch of U.S. resource management history. The American poets and writers Elliot, Wadsworth, and Thoreau were directly influenced by European Romanticism and are all hailed as champions of a uniquely American sentiment towards appreciation of wild nature (CITE Nash). The paradox of modernity is also apparent in the life of Aldo Leopold (Cite Meine). In spite of his influential achievements as a wildlife biologist and wildlife manager, there are clear elements of Romanticism in his popular writings and his "Land Ethic" (Leopold, 19XX). The American landscape painters from

the late 1800s such as Beirstadt, Moran, and [SMITH-JONES?] created a strongly Romantic image of “sublime” nature that helped shape a landscape aesthetic and influenced the way Americans look at scenery and wild places (Cronon, 1995). So even though science and instrumental rationality have been institutionalized in 20th Century North American resource management, the Romantic critique has persisted in a variety of both adversarial and complimentary forms and iterations throughout the last 150 years.

Romanticism was not the only strand of 20th Century critique of Enlightenment rationality. Beyond the philosophical critique offered by Romanticism, other emerging social science disciplines offered their own critiques. Weber’s “iron cage” and Habermas’ “colonization of the lifeworld” were sociological critiques of advanced forms of instrumental rationality and technocracy. Economists, anthropologists, psychologists and social psychologists such as Pareto, LeBon, Mead, La Pierre, and William James each challenged rational actor assumptions about behavior and motivation in individual and social behavior. “Men were far from being simply the self-interested, utility-seeking, pleasure-maximizing, rational creatures of standard nineteenth-century political and economic theory” (Kumar 1995, p. 96). Le Bon’s famous book *The Crowd* was an early description of collective action where individuals typically suspend reason and “normal” behavior when they become caught up in crowd behavior, and engage in activities that under normal circumstances they would consider inappropriate. Mead’s symbolic interaction framework features the integrative urges of communication and role expectations as his behavioral foundation, rather than self-interest and individual utility. La Pierre study of racial prejudice dramatically critiqued rational actor assumptions by graphically showing the disconnect between attitudes and behavior.

But perhaps the most devastating critique of instrumental rationality came from Freud and the emerging psychoanalytic school of psychology. Freud argued that observations of individual behavior represent only the tip of a much deeper psychic “iceberg,” where acting individuals have access only to only the surface logic and motivation of their behavior (the “id”). Underneath the surface exist a complex mixture of repressed urges, subconscious desires, and irrational fears and fantasies that have been sublimated from past experiences into a psychic caldron of unconscious forces that direct individual behavior. Implicit in Freud’s theory is the assumption that the advances of the modernity have come only at the cost of psychic suffering and personal subjugation. Freud’s theory, therefore, was the ultimate “dethronement” of individual rationality as the engine of social progress.

Within environmental discourse, the modern day equivalent of this “dethronement” of Enlightenment rationality may be the recent deep ecology and gaia approaches to thinking about the natural world. Deep ecology has invoked most of the critiques mentioned above including romanticism, the anthropocentrism of modern civilization, technocracy, and social engineering. They take direct aim at the principles of a positivistic science to propose a “new physics” of the environment where the earth is thought of as a living organism where local communities must seek an appropriate balance and wholistic harmony with nature, rather than a mechanistic system that can only be managed by experts. With its eclectic blend of philosophical justifications and its all-inclusive appropriation of “deep” spiritual traditions from around the globe, deep ecology has fashioned a form of social protest that rejects the instrumental rationality of modern resource management. In rejecting Enlightenment rationality, however, it nevertheless articulates a

strongly utopian vision that embraces Enlightenment notions of progress among individuals and their social practices.

The Failure of the Enlightenment?

While most of these 19th and 20th century critiques challenged the logic of instrumental rationality and Enlightenment narratives of progress, most of them still clung to some notion of managed change in the face of technocracy and modern institutions of alienation. Whether through social revolution, a new aesthetic sensibility, therapeutic intervention, or a “new physics,” most traditions that were critical of Enlightenment ideologies had not given up on its promise of improving the human condition. What distinguishes contemporary postmodern discourse, however, is its complete rejection of any teleologically based assumptions about human or social improvement. The philosophical writings of Nietzsche and others from the *fin-de-siècle* movement such as Kierkegaard, Heidegger, and Voltaire, provided the foundation for the postmodern assault on meaning, truth, and progress.

Nietzsche argued that even though the social context changes through time because of technological innovation and social organization, humanity is still burdened with the same inherent frailties throughout time and is doomed to repeat the mistakes of the past. Nietzsche’s critique of “the highest values” opened the door to contemporary “social constructionism” and “deconstructionism” by emptying truth of its absolute quality, and arguing that what people claim as truth is “only the solidification of old metaphors.” His philosophical agenda was an effort to lay bare the myths of the Enlightenment, which for him were no more than beliefs or opinions of certain social groups. Enlightenment rationality and its claims for discovering truth,

for Nietzsche, was no more than systems of persuasion, or “the will to power.” His analysis shattered the link between observation and reality/truth, and instead insisted that claims about truth based on Enlightenment reason are no more than persuasive arguments aimed at domination. The conclusion drawn by Nietzsche (1967) was that “nihilism stands at the door” (p. 7). “For some time now, our whole European culture has been moving as toward a catastrophe, with a tortured tension that is growing from decade to decade: restlessly, violently, headlong like a river that wants to reach the end, that no longer reflects, that is afraid to reflect” (p. 3). Lyon (1999) paraphrases Nietzsche’s version of a nihilistic project: “Morality is a lie. Truth is fiction. The Dionysian option of accepting nihilism, of living with no illusions or pretense, but doing so enthusiastically, joyfully, is all that remains” (p. 12).

In spite of its radical cynicism, this philosophical movement has sustained a strong influence in cultural and social expression throughout the 20th Century. Modernism in art, music, and literature has direct links to this radical view of the world. It is a cultural movement characterized by a purposive and decisive rupture with the past, that seeks artistic expressions that reflect change purely for the sake of change. In music, the first performance of Stravinsky’s *Rite of Spring* caused a scandal because its radical break with the established Romantic style: his use of meter outside the standard 4/4 and 3/4, his harsh and seemingly atonal melodies, and a harmonic structure that broke all previous conventions. Other 20th Century composers such as Schoenberg and his 12-tone row, and Cage with his emergent performances pressed the classical logic of harmony, melody, and musical expressiveness to its extreme, and exposed the pretenses of existing “high culture.” In art, surrealist painters such as Dali, Breton, and Buñuel reacted to the realism of the classical tradition by depicting images of radical fantasy that were represented

as being as real as the reality represented by modern science. Later, impression, cubism, and schools of abstract art depicted distorted and symbolic representations of reality that were a direct affront to earlier schools of realism and naturalism inspired by Enlightenment rationality. In literature, James Joyce's novel *Ulysses* broke from traditional literary conventions of narrative and interpretation by recounting the experiences of Leopold Bloom as a stream of consciousness during an 18 hour period in Dublin. Other literary expressions of modernism include the theater of the absurd where dialogue between characters purposefully breaks standard rules of logic and interactive expectation to expose the "bourgeois" ideologies of standard literature. "Modernism" then, is a cultural critique of "modernity," which attempts to pull back the veil of Enlightenment sensibilities and expose them as tradition-based ideologies of reason and civilization, that have no material basis except as mechanisms of power and influence.

Given these strands of philosophical, social, and cultural critique, were the promises of the Enlightenment exhausted by the second half of the 20th Century? Critical theorists at the Institute for Social Research - commonly known as the Frankfurt School - where among the first social scientists to argue that the promises of the Enlightenment had failed. Adorno and Horkheimer's famous *Dialectic of the Enlightenment* outlines how the Enlightenment's vision of a rationally managed society was crumbling in the face of 20th century global events. The Frankfurt School took critical aim at the condition of modernity, given the rise of European fascism, nazism, genocide, global war, and the potential for nuclear mass destruction. These events were the strongest evidence yet that the logic of rationality and progress was crumbling and society stood on the cusp of a new social order. The "underside" of 20th century technocracy was a barbarism that moved beyond regional bounds to encompass the globe. The resulting

“existential angst” has created a rift between the positivist certainty of the past and a more contemporary cynicism, relativism, and self-absorption. And, in the effort to control new sources of global risk and heightened social anxieties, new social institutions and bureaucracies have replaced older myths of domination, based in Enlightenment ideologies, with new myths of domination, drained of their grand narratives of progress and perfectability, and drained of any sense of truth, certainty, or the necessity of first principles.

After Modernity?

Few would deny that the contours of contemporary life have changed rapidly and substantially over the last 50 years. What is contentious however is the degree to which the contours of contemporary life have become severed from the forms of 19th and 20th Century modernity inspired by Enlightenment principles. The postmodern debate, or the so-called “battle of the books” (Kumar, 1995), represents an array of theories attempting to describe what makes contemporary social conditions, beginning some time in the mid to late 20th Century, different from the preceding forms of modernity. At one extreme of the debate are those who argue for a “postmodernity” - an end to historical narratives of progress, distinctly different forms of social order, and a newly embraced relativism that grows out of difference, specialization, and fragmentation. At the other extreme are those who argue for a “late modernity,” which reflects broad economic, political, and social changes, but which views the 20th Century failings of Enlightenment rationality not as an indictment of its validity, but as yet an unfinished project that demands perpetual diligence and perseverance under constantly changing conditions to achieve its promise.

Postmodernity: The End of History?

Postmodern theories, which have alternatively used labels such as post-industrialism and post-structuralism, argue for a decisive transition in society that began some time during the 20th Century, and which, when complete, will have been as momentous as the transition from feudalism to industrialism. The unifying proposition behind most of these theories is idea that the diversification and fragmentation of the modern condition has destroyed the basis for cultural and moral consensus, and consequently dispensed with reified notions of progress and human evolution. Contemporary social complexity is no longer integrated by an overarching theme or value system. In its place, is an emerging global society that flourishes in its inevitable fragmentation by embracing diversity, celebrating consumption, thriving on technologically mediated social contacts and experiences, and constructing a “hyper-reality” of communicative symbols and localized narratives. Some have hailed this postmodern condition as the “end of history” (Fukuyama, 1992), where the foundation of the Western historical narrative is drawing its last breath at the close of the millennium. Others have been a bit more focused in their analysis of the contemporary condition and a bit less expansive in their conclusion.

Post-Industrialism. One prominent account of the postmodern condition has been the transition of industrialism in the late 20th Century. Industrialism as developed in 19th Century Europe and 20th Century North America was based on principles of instrumental rationality, efficiency, and systems based logic. Modernist industrial practices relied on an ever more detailed division of labor subject to Taylorist principles of task efficiency, and resulting in a Fordist style of mass production. The focus of modern industrialization was on the production of standardized products that, because of manufacturing efficiencies, were priced for mass

consumption. Marx reminds us however, that one of the prime contradictions of capitalism is its drive to develop labor-saving technologies in the production process. And while most post-industrial theorists are not Marxists, early theorists recognizes the gradual decline in industrial labor and the rise of employment in the service sector and in the professional and technical management sectors (Kumar 1978, CITE). So, the contemporary productive process is less about the production of goods, and more about the production of information - i.e., the information society (Bell, 1973). Similarly, capitalist expansion today is less about the movement of goods, and more about the movement of financial services across the globe (Flora, 1991).

Daniel Bell (1973) and others have characterized contemporary society as the “information society,” where “knowledge and information are becoming the strategic resource and transforming agent of the post-industrial society...just as the combination of energy, resources, and machine technology were the transforming agencies of industrial society” (Bell 1980, p. 531). For Bell, the information society is replacing industrial society, just as industrial society replaced the community agrarianism of feudal times. If this is true, Marx’s labor theory of value holds little currency in contemporary society, and a “knowledge theory of value” becomes the keystone supporting contemporary modes of production. For example, the cost of raw materials in computer manufacturing represents less than 5% of the price that consumers pay. The remaining costs are knowledge costs (CITE - Freudenburg says this somewhere). Communication in the information society has also been revolutionized in the last 20 years with technological advances in satellite transmission, fiber optic connectivity, wireless communication, and micro-computer technologies. The globalized information exchanges available today have radically compressed the barriers of spatial and temporal communication.

They have transformed “mass media” into “niche media,” and substantially broadened the bounds of personal and expressive forms of communication. In short, the mediated experience of the information society has drastically altered the way people think, act, and communicate.

This “de-massification” of the information society parallels concepts inherent in “post-fordist” theories of post-industrialism. Lash and Urry (1994) describe a broad transition in the organization of industry where production strategies have shifted from mass production and price minimization, to one of flexible specialization where manufacturers have decentralized the productive process and rely more on sub-contractors who share the costs of specialized technologies and skilled labor. This division of labor between end-product distributors and their small-scale cottage industry suppliers also allows for more rapid product innovation.

Contemporary consumers no longer seek mass-produced consumer goods, but also develop specialized tastes for a diversity of products, and product loyalties that offer a sense of personal local identity that lies outside of modernist notions of social roles oriented around gender, class, or race. In sum, product standardization, homogeneity, and economies of scale are being replaced by product diversification, brand identity, and lifestyle expression in contemporary consumer choices.

As a primarily biological enterprise, North American resource management, has traditionally steered clear of market mechanisms in its provision of public goods. As a result, recent social conflict may in part be due to management lack of recognition of these contemporary contours of change. The culture of expertise in the scientific enterprise holds less currency and influence in a society that recognizes that information is the new currency of social influence. To have a say in public matters, one must learn to mobilize information to make a

persuasive argument regardless of one's background and training. Information availability is no longer the constraint to participation in public conflict that it once was. Moreover, does public controversy arise from the centralized organization of resource management agencies? These agencies may be producing Fordist style products for mass consumption, such as timber production, grazing access for the meat industry, and scenic drives for the tourism industry. To what extent have management schemes provided for post-fordist types of products and services such as non-timber forest products, non-game rangeland bird species for bird-watchers, or ecotours to archeological dig sites? Standardization of services and resource products in contemporary society may cause as many management problems as it prevents. [WEAK ARGUMENT - NEEDS SOME WORK. PERHAPS AN ETHNICITY ARGUMENT MIGHT ALSO FIT HERE.]

Post-Structuralism. There have been few social theories that have received more thorough and vociferous criticism than Talcott Parson's structural functionalism (CITE). His systems based theory, which championed modernists principles of instrumental rationality within the context of a functionally integrative social structure, was most prominently criticized in North America by neo-Marxist theorists. The consensus-conflict debate (CITE) was a direct confrontation between Parsonian theorists, who believed social order was the product of consensus building efforts within a functionally operative social system, and neo-Marxist theorists who believed social order was the product of conflictual and competitive relationships that constantly challenged the ability of societies to reproduce themselves. An alternative criticism of structural functionalism, however, was generally a non-Marxist form of "post-structuralism."

Post-structuralism contrasts the modern condition, characterized by authority, normative constraint, and functionally integrative systems, with the postmodern condition, characterized by a radical pluralism and expanding diversity of argumentation. The decline of modernist organizing ideologies and the rise of local, communitarian pragmatics makes individual interaction relative and contingent, and destabilizes the integrative capacity of centralized social structures. For theorists such as Hassen (1985), this transition is far more profound than Durkheim's progressive division of labor or Weber's expansive social complexity. Instead, he describes the contemporary social condition as a move "toward 'Indeterminacy,' a compound of pluralism, eclecticism, randomness, and revolt. Indeterminacy also connotes 'deformation,' a stress on decreation, difference, discontinuity, and 'detotalization'..." (Kumar 1995, p. 108). This brand of post-structuralism embraces a growing ambiguity of modern life that comes from "deconstructing" the foundation of meaning inherent in modernist principles of social order. Likewise, it promotes an uneasy ambivalence about social action that comes from making transparent the relativity of modernist "truths," values, and unifying ideologies.

European post-structuralists have pushed this argument to its extreme the postmodern condition as the decline of the autonomous human subject. Foucault called this the "death of man," Derrida called this the "death of the subject," and Barthes called this the "death of the author." For the French post-structuralists, the contemporary condition precludes the possibility of the confident, sovereign individual, who by force of will and moral constitution can purposefully direct the course of human affairs toward some ideological goal of human improvement. For Lyotard, expressions of postmodernity in contemporary society are expressions of modernity drained of its revolutionary, transformative potential. So, the more

prominent feature of contemporary events in the postmodern world is the randomness of influence, a loss of direction and passion in social action, and the transparency of power for its own sake.

Taken to its extreme, the French post-structuralist debates reopens the Cartesian philosophical debate about the foundation of knowledge. Instead of situating the source of knowledge within the autonomous subject, post-structuralist theory reduces the individual to a series of linguistic practices or discursive events that constitute and reconstitute the self in ongoing interaction. This radical relativism directly confronts the foundations of positivist notions of reality. Baudrillard's concept of "hyper-reality" articulates a reality constructed only of signs and symbols articulated and reproduced in contemporary discursive practices. The contemporary arrangement of these signs move beyond modernist notions of function and systems based logic, and are reflected in a dazzling cacophony of signs and images juxtaposed in novel and often incoherent ways through new forms of post-fordist production and through advances in information technologies. The task for contemporary citizens is to construct, in each discursive moment, their own sense of coherence and order out of an explosion of random or atypical juxtapositions of signs. For radical post-structuralists, the hallmark character of the postmodern condition is the point at which the sign becomes more real than that which is signified. The *simulacra* of postmodern existence (Eco, 1987) celebrates the sign value of the copy over the model itself (e.g., Disneyworld, Las Vegas, the pornography industry, or Monument Valley as the sign of the "wild west.") Consequently, the task of humans in the post modern condition is no longer human and social evolution, but the negotiation through the

radical relativity of meaning, and adaptation to rapidly changing signs that are constantly shifting the contours of cultural capital and appropriate standards of human action.

In spite of the semiotic extremes of post-structuralism, the concept of deconstructionism has been at the heart of the so-called “New Wilderness Debate” within North American resource management. Traditionally, the American concept of wilderness has been a form of anti-modernity, where the excesses of industrialism and capitalistic growth have exerted predatory pressures on the landscape and compromised the ability of ecosystems to sustain themselves. Wilderness, as an antidote to modernization, has confronted the sprawl of excessive growth by preserving the last vestiges of wild space on the globe - places that preserve the integrity of natural process, providing a safe home for threatened animal species, and allowing humans the opportunity for a more basic/spiritual connection with wild things and their place in the natural order of the world.

Proponents of the “New Wilderness Debate” (Callicott 1991, Cronon 1995) however, have challenged this received notion of wilderness. Cronon (1995) asserts that “The time has come to rethink wilderness” (p. 69). Callicott (1991) challenged the philosophical assumptions of the wilderness idea: its bifurcation/separation of human systems from natural systems, its ethnocentrism that ignores pre-European human influences on the landscape, and its management framework that produces artificial ecological boundaries that preserve only “vignettes of primitive America. Callicott exposes the ideology of wilderness by arguing that it is a system that preserves the “scenery habit” for American consumers of natural landscapes. Cronon (1995) goes even further by explicitly stating that wilderness is a social construct. Echoing some of Callicott’s critique, Cronon criticizes wilderness for catering to bourgeois elitism, for

establishing an artificial ecological artifice that rigidly excludes human presence, for reifying wilderness as “landscapes of authenticity” against with all truth is measures, for its “flight from history” that ignores the role of past civilizations in the landscape, and its dualistic vision of humanity and nature as opposite poles of living systems. Both critiques call for a new way of thinking about wilderness, and a new approach to wilderness management, that dispenses with the human/nature duality. While their critics disparage Callicott and Cronon for their historical revisionism (Worster 1997) and postmodern deconstructionism (Sessions 1997), their criticism of wilderness as an idea, or sign, utilizes a rhetorical method that drains wilderness of its grand narrative and attempts to situate the wilderness idea in local contingency and in the relativity of adaptive management principles. That is, they raise the need for a new approach to wilderness more consistent with postmodern ambivalence and uncertainty.

Post Modernity: Reclaiming the Autonomy of the Subject.

Earlier theories of postmodernity argued that the promises of the Enlightenment had failed given global events of the 20th Century, and because of this, the confidence of an autonomous, rationally acting individual was giving way to a conception of the self as a purveyor of an ambivalent system of signs and symbols. This radical relativism was a direct legacy of Nietzsche’s nihilism. One could grasp the existential anxiety of genocide, facism, and the potential for global destruction *only* by removing all teleological purpose from the designs of human action, and focusing on symbol exchange within a community of cultural consumers. More recent postmodern theory, however, has attempted to reclaim the autonomy of individual

action by reconceptualizing human behavior not as instrumentally rational, but as a *discursive practice* within the context of the postmodern condition.

Bauman theory of postmodernity was perhaps most instrumental in reclaiming the autonomy of the subject (Delanty 1999). Unlike earlier theorists of modernity who interpreted 20th Century events as evidence for the failure of the promises of the Enlightenment, Bauman (1989) argued that Nazism and the extermination of 6 million Jews was the logical extension of Enlightenment rationality - i.e., a natural and predictable outcome of an extreme form of instrumental rationality. The Nazi's appropriation of the science of eugenics, and its goal of racial perfection was the driving force behind selective experimentation and wholesale extermination of Jews in the concentration camp. And as Bauman points out (1991), it was the legitimization and neutrality of the scientific enterprise that enabled German scientists to perform unthinkable experiments on human subjects by day and to become sensitive nurturing parents to their children at night. So, postmodernity, for Bauman is not a condition of individual helplessness given the failure of Enlightenment rationality. Postmodernity, instead is characterized by a growing sense of ambivalence - pervasive uncertainty colored by an incipient sense of dread - that has resulted from the logical extensions of Enlightenment rationality as it has been played out in the late 20th Century. He uses the metaphor of an ever expanding horizon. The task that modernity sets for itself, based on truth, humanity, progress, or evolution, requires a horizon upon which human action is focuses. "Like all horizons, they make possible walking with a purpose. Like all horizons, they recede in the course of, and because of, walking. Like all horizons, the quicker is the walking the faster they recede" (Bauman 1991, p. 10). So the logic of modernity has produced an exponentially expansive condition of postmodernity where

ambiguity, ambivalence, fragmentation, pluralism, and relativism gradually displace certainty, order, truth, and ideology.

What specifically are these conditions of postmodernity? Collectively, postmodern theorists generally agree on at least five broad contours of postmodern existence (Kumar 1995). First is the transformation of the political sphere. Traditional institutions and political alignments of the nation state are weakened, giving way to “new social movements” and interest group politics based on locality, gender, race, or sexuality, rather than being based on left/right distinctions or a politics of nationalism. Second, the lines between class based systems of stratification aligned along income or employment categories dissolve and are replaced by a greater pluralism of social identities. Third, postmodernism celebrates difference - not only the diversity of ethnic and cultural traditions, but also the multitude of emergent and shifting forms of social identification. Fourth, the postmodern condition is a global condition where the internationalization of economic and cultural practices transform national structures by encouraging ethnic pride and by forging new local and regional alliances. Finally, the postmodern condition has radically compressed contemporary notions of space and time. Not only has the development of communications technologies brought about a demographic decentralization from urban centers, but they have also allowed instantaneous information transfers across the globe. With this revolutionized capacity for communication, individual use of time has radically changed - i.e., a “time-thickening” (Robinson & Godbey 1996) - and space is no longer a constraint to instant communication.

These conditions of postmodernity provide the social backdrop to contemporary experiences of ambivalence and incoherence in an endless stream of fragmented daily events.

But instead of retreating into a regressive spiral of deconstructive relativity, Bauman asserts the possibility of individuals becoming reconstituted moral agents. For Bauman, moral choice comes from the recognition of a “responsibility of the Other.” However, responsibility for the Other is pregnant with ambivalence and a poor guide for human action. Modernity’s solution was the creation of bureaucratic structures of institutional law that removed the ambiguity of choice from individuals and codified action in normative rules and regulatory prescriptions of behavior. This socialization of morality and risk separated moral choice from the normative framework of society, and, following Foucault, led society to maintain compliance through surveillance and corrections. So, Bauman’s theory of postmodernity seeks to shed the surveillance of modernity and reclaim individual responsibility as the prime guide to action given ambivalence. He cites Agnes Heller’s assertion that the challenge of the contemporary condition is to “transform our contingency into our destiny” (Bauman 1991, p. 231).

While Bauman reasserts the autonomy of the subject in postmodernity within individual action, Touraine makes claims for the autonomy of the subject within collective action - specifically within New Social Movements. Touraine, like Bauman, was also concerned about the prevalence of state influence and control under conditions of modernity. But, he also observed that the prominence of the nation-state was declining under globalization pressures, and with it has come a contemporary separation of the state from social life. The engine of contemporary social change, then, lies in the type of new social movements based not in the attempt to win political control, but in new and widespread attempt to influence the basic assumptions of society. New social movements arise from a politics of lifestyle based on localized interests that emerge and dissolve as the issues are contested and influenced in public

discourse. For Tourraine, New Social Movements are a uniquely trademark of the postmodern condition that reasserts the capacity for human self-determination. But its self-assertion is not based in functional or utilitarian principles of rationality, but is instead based in pragmatic contingencies of local discourse and argumentation.

It is at this stage of theoretical development that the disconnect between the postmodern condition and resource management practices becomes most readily apparent. When conflict arises, resource managers typically employ a stakeholder model to understand competing claims for the provision of public goods. The stakeholder model typically operates from a modernist framework, where participants in a dispute are assumed to make rational judgements about allocation options that will maximize their personal or collective benefit, and then act in a way that will maximize their political influence in the final allocation outcome. Managers also use the tools of science to demystify the dispute. They assign distinct value orientations to competing members of a controversy in an effort to find some grounds for consensus building. In sum, managers muster the tools of modernity to systematize choice and justify the “zero-sum” game inherent in management decisions. Given the postmodern condition, however, such a system works within its own box of centralized mandates based on legal surveillance and managerial control. This system is insulated from the “politics of lifestyle” inherent in new social movements and insulated from local discourses aimed at changing the basic assumptions of resource management agencies. Of course, institutions are organized in a way that facilitates self-preservation, but the postmodern “writing on the wall” would suggest a future of ever-expanding conflictual arenas that demand a less centralized regulatory system and an institution of

command that relies less on surveillance and more on participatory understanding. [ANOTHER ARGUMENT THAT NEEDS SOME WORK.]

Late Modernity: An Unfinished Project?

Theorists of postmodernity generally share an assumption about the failure of Enlightenment promises given the events of the 20th Century. Principles of instrumental rationality, productive efficiency, and human evolution have simply not delivered the utopic image of society anticipated by Enlightenment “prophets.” The response has been to give up on these promises, and to analyze the contours of 20th Century change that distinguish contemporary social conditions from modernist social conditions. The response has ranged from a radical relativity where human activity is no more than the manipulation and exchange of signs, to an existential anxiety, where humans struggle to assert some sense of personal direction or destiny given a pervasive sense of ambiguity and ambivalence. Critics of postmodernity reject the notion that the promises and principles of the Enlightenment have failed and can no longer offer valid societal direction in contemporary life. While the events of the 20th Century suggest a distorted or degenerated form of modernity, instrumental rationality is still an integral part of contemporary economic and social life, and Enlightenment hopes for human improvement are still viable energizing forces for human and social development. The task, then, for “late modernity” is learning how to reinvigorate the progressive elements of the Enlightenment project given the very substantial distortions of the modernity project in contemporary life. For theorists of late modernity, modernity is an unfinished project.

Reflexive Modernization. The concept of reflexive modernization (Giddens 1990,1991; Beck 1992) has been one prominent way of characterizing contemporary life as an unfinished project of modernity. Giddens' conceptualization of this concept arose out of his critiques of classical sociological theory and the accounts of modernity posed by Marx, Weber, and Durkheim. Each of these theorists insisted on a rather rigid distinction between agency and structure, or the tension between individual volition and freedom of choice and the constraints placed on individuals by the obligations or regulations of institutions and social structures. Marx's concept of alienation, Durkheim's concept of anomie, and Weber's "iron cage" were each expressions of the growing negative consequences of structural constraint on individual action. From this foundation, the sociological task has been to articulate a theory of individual emancipation (agency) in the face the impersonal and dehumanizing tendencies of modernist social organizations.

For Giddens, however, this uni-directional focus on structural constraint as a limiting factor in human agency and its subsequent emphasis on emancipation was an inadequate grounds on which to build a science of society. His theory of "structuration" (1984) attempted to reconcile "the imperialism of social structure" and "the imperialism of individual experience." Structuration theory argues for a conjoint constitution of social structure and individual action in everyday human affairs. Social structure is not a reified object or "social fact" exerting its pervasive force on the thoughts and actions of individuals. Rather, social structure is both constituted by, and constitutive of human action. Individuals may embrace and adhere to the behavioral expectations, obligations, and routines of certain modes of social organization. But, it is the behavioral enactment of these expressions of social structure that reproduce the general

boundaries of social order, and at the same time reshape the specifics of social order to the spatial and temporal context of an individual's everyday life.

For structuration theory, the impulse of late modernity is the growing capacity, or perhaps necessity of reflexivity that seeks to make sense of an increasingly complex set of social arrangements and that seeks to codify the routines, habits, and expectations implicit in the constitution of new social arrangements. Giddens echoes many of the postmodern theorists in describing the contours of contemporary life. New technologies of communication have created a time and space "distanciation." Communication has become almost instantaneous, and a person's global location has less influence on one's communication opportunities. Contemporary life has brought about an explosion of "identity projects," or more fluid expressions of self in the variety of everyday contexts. Individuals are no longer chained to the role expectations of social class, but now can negotiate through an expanding array of identity narratives, forging new identities based on local contingency and competently interchanging roles in ways that fit the specifics of everyday situations. Contemporary life has also brought about an expansion of expert systems. The rationalization of industry and technology has created not only an explosion of scientific specializations, but also an explosion of technocrats charged with managing and integrating complex systems and the subsequent risk technologies of the late 20th century. For Giddens, the organizing principle behind these contours of contemporary social life is the capacity to reflect on the risks, challenges, and pressures of modern existence and to the subsequent capacity to act on the inconsistencies, contradictions, and dangers of contemporary life. In short, reflexive modernization is modernity becoming aware of itself, and through social discourse and interaction the capacity to take responsibility for itself.

The Risk Society. Beck (1992) elaborates the concept of reflexive modernization with a unique account of late modernity that accommodates the growing awareness of global environmental crisis. Most theories of modernity argue for the failure or deformation of Enlightenment rationality in the 20th Century, and then characterize contemporary life by its vacuous relativity or by an existential anxiety caused by fragmentation and ambivalence. Beck's account is patently different. He fully recognizes the continued hegemony of instrumental rationality and the ideology of science in contemporary life. And it is this central role of science and technology that have created a dramatic rift between the conditions of life today (late modernity) and the conditions of life 50 years ago. Whereas the traditional modernity of industrial society was characterized as a problem of the distribution of goods or wealth, today's form of late modernity is characterized by the distribution of "bads" or risks - i.e., the production of goods vs. the production of harm. In this risk society, traditional forms of social organization such as social class and nationalism are giving way to social organization oriented around risk management. Because contemporary risks have a human/scientific origin and have the capability to produce global harm, the risk society demands a reorganization of the institutions and ideologies that have engendered contemporary hazards.

Like Giddens, Beck appropriates the concept of reflexive modernization within the public sphere as a response against the fortress of knowledge constructed by the science that serves the interests of instrumental rationality. Beck states that:

"...the sciences are *entirely incapable* of reacting adequately to civilizational risks, since they are prominently involved in the origin and growth of those very risks. Instead - sometimes with the clear consciousness of 'pure scientific method,' sometimes with increasing pangs of guilt - the sciences become the *legitimizing patrons* of a global industrial pollution and contamination of air, water, foodstuffs, etc., as well as the related

generalized sickness and death of plants, animals, and people” (Beck 1992, p. 59, emphasis in the original).

For Beck, at the root of this deformed modernity is knowledge and control of the production of knowledge. Consequently, the emergence of more public forms of reflexive modernization provides the potential to challenge the hubris of scientific knowledge and to socially redirect the way knowledge is used in contemporary life.

Beck’s risk society thesis and his critique of the hegemony of science provides a powerful interpretation of conflicts in contemporary resource management. The Progressive era enthroned science at the center of resource management agencies. But if science has become the problem for contemporary risk society - i.e., the so-called “crisis of science” - then the spirit of reflexive modernization in contemporary society legitimates public dissent in the face of scientific “proof” and what Beck calls “the high art of proving causality.” When the application of natural sciences can create its own set of “risks” - e.g., loss of biological diversity in plantation forestry or range management, or the loss of traditional hunting and gathering rights in wilderness areas - reflexive modernization makes scientific “certainty” transparent and encourages the capacity for collective redefinition of allocation options. In short, the risks perpetuated by the scientific enterprise have voided its exemption from public criticism and made scientists and managers work much harder to understand their own assumptions and frameworks, and to justify their conclusions and recommendations.

Theory of Communicative Action. If contemporary existence is characterized by a growing awareness of relativity, ambiguity, ambivalence, and risk, how then do individuals make a difference, or have an effect on the outcomes of public life? The development of industrialism

brought about the declining influence of theocracies and monarchies and set in motion various forms of representational government - republicanism, democracy, etc. For Giddens, late modernity has also produced the rise of technocracy: an increasingly complex bureaucratic management culture of expertise and professionalized administration housed in the branches of the state and institutions of capital (finance, insurance, marketing). Habermas is less neutral in his analysis of this trend. He argued (Habermas 1962, 1968a) that the pervasive growth of technocracy is symptomatic of a creeping amplification of the public sphere's influence on everyday life - i.e., the "colonization of the lifeworld" through mechanisms of external control (regulation, media, debt, cultures of facticity) and surveillance (laws, normative expectation, public opinion, "intelligence," state sponsored enforcement and violence). So Habermas' earlier (pre-1970s) analysis of late modernity recognized the rather serious challenge that modern social arrangements posed for the autonomy of the individual subject.

Unlike his Frankfurt School colleagues, who interpreted this technocratic "iron cage" as a failure of modernity, Habermas interpreted these social conditions as the defining force for an emerging form of late modernity. This form of late modernity was not a new era that springs out of failure, but an unfinished product of a misdirected expression of modernity. For Habermas, the principle task for contemporary citizens has been to reclaim the promises of the Enlightenment by "recolonizing the lifeworld," or reasserting individual autonomy in everyday affairs. This entails reviving the importance of practical knowledge and human interests (1968b), based in interaction and communication, over technical knowledge and market and administrative interests, based in the technocratic culture of expertise. It was from this foundation that

Habermas elaborated his theory of communicative action (1981), and later applied his principles of discourse to law and morality (1992).

Habermas' theory of communication action (1981) was formulated out of his analysis and critique of Weber's treatment of rationality. Habermas extended Weber by making a distinction between "communicative rationality" and "strategic/instrumental rationality." The former was a rationality devoted to achieving understanding between discursive partners in an interaction sequence, while the later was a rationality devoted to the mobilization of power and influence in the service of some goal or desired outcome. For Habermas, this distinction paralleled the distinction between the administrative and market systems of the public sphere and the individual's human and moral interests of the "lifeworld." Weber claimed that the pinnacle of modernity was the instrumental rationality of public sphere. The deformation of this type of modernity was the way that bureaucratic systems obscured the objective demands of power and influence among capitalist organizations as a function of the "hidden hand" of markets. The integrative mechanisms of systemic/institutional rationality can coordinate action without the need for discussion or argumentation. Their steering mechanisms are non-linguistic, and operate through institutional codes, markets, and ideologies of efficiency and science. Habermas' alternative was the liberating power of communicative rationality. As individuals embrace their capacity for a rationality of critical thinking, they become liberated from tradition and an externally imposed life project. As a result, the horizon of the lifeworld opens up and discussion and debate and become the basis for social integration and decision-making through understanding and agreement.

The implications of Habermas' communicative action go well beyond nationalistic platitudes about North American democracy and freedom of speech. In spite of these ideologies, North American and European capitalist development have been the prime expressions of modernity's degeneration. The fragmentation and ambivalence of the late modern condition have brought about a decline in efficacy of representative politics and an explosion of diversity and pluralism in the public sphere. Given the new "celebration of diverse viewpoints," the illusion of a politics based on consensus is dying, and a politics of power has been made transparent by an increasingly active and diverse politics of communicative action. The ideal for Habermas is the "pure speech act," where participants in public debate engage in communicative practice on equal footing, where the quality of the argument is the basis for action rather than the ideology of facticity or the mobilization of power coalitions. More importantly, Habermas' theory creates a more dynamic vision of society that liberates the lifeworld from action based on reified concepts of truth and certainty, and opens up the possibility of emergent principles of rationality and standards for action more suited to the contingencies and ambiguities of existence in the late modern age.

Discursive Democracy. This emergent quality of contemporary life has been further developed by recent theorists of discursive democracy. Hajer (1995) analysis of environmental discourse criticizes the "polling culture" of contemporary environmental management and policy making. The polling culture is based on assumptions of methodological individualism. Using the methodological tools of science and the assumptions of instrumental rationality, policy can be built on public opinion because individuals have a stable system of beliefs and values that are based on a coherent and consistent value orientation, and which can be instantaneously recalled.

These beliefs are based on principles of “noninterference” - they are not subject to contingencies of the situation - and environmental realism - that beliefs are based on an objective reality that provides a clear guide for decisions and action. In short, the polling culture is based on the modernist faith in a systems-based technocratic society.

On the contrary, however, Hajer observes that in everyday life, there is little evidence for coherent and consistent value orientations and belief systems. Instead, given the growing fragmentation and ambivalence in everyday life, what people actually say and do is more frequently variable, context dependent, and contradictory. Discursive democracy proposes an alternative model of behavior based on rhetoric in the context of contingency and uncertainty, and the constitutive role of discourse in determining social action. It argues for a radical epistemology. The distinction between subject and object becomes meaningless as all claims for knowledge are rhetorical claims based on discussion, argument, and resonance. Discursive democracy, then liberates the public sphere from the “invisible hand,” the bureaucratic “iron cage,” and consumption for its own sake by basing it on the emergent possibilities of discourse and communicative action in a context of growing diversity and rampant, if not polarized pluralism.

Discourse and Social Values

When situated within the context of modernity theories, the concept of a social value is born out of the positivist tradition of modern science. It is alternately conceptualized as a “social fact” that can be described and measures as any other object in the world, as the glue that binds society, as a system, together, or as the metric of the market driven distribution of goods. Each conceptualization has its foundation in Enlightenment principles of science, utility, and

instrumental rationality. If one follows the logic of postmodernity or late modernity, however, such conceptualizations are losing their validity in a world ruled by a growing ambivalence: where decisions based on “value-based” ideologies such as nationalism, efficiency, preservationism, conservationism, integrated management, or science-based realism ring hollow. Instead, the public sphere in resource management is confronted with rampant dissension, polarization, and radical protest.

In this context, the culture of expertise within resource management agencies is losing its efficacy. No longer are managers the “mediators” of public demand. The lifeworld has become re-energized in contemporary society, and individuals in a debate have discovered a liberating ability to step outside of the technocratic, scientific box that resource managers use to justify their final decisions. And as participants reframe resource issues outside of their traditional boxes, managers find themselves becoming just another advocate (for a technocratic, scientific perspective) in a more broadly defined arena of public discourse. At the same time, the concept of value is also liberated from its scientific framing, and becomes an emerging property of the discursive practices of argumentation, justification, persuasive appeals and resonance. Instead of being an anchoring point within an established social order, social values become dynamically implicated in the ongoing constitution (i.e., structuration) of social order through the everyday discursive practices of individuals who are reinvigorating the lifeworld. [THIS SECTION WILL NEED SOME MORE ELABORATION.]

The goal of this book, then is to explore the emergent properties of social values in everyday contexts, and tie the social value construct to the discursive practices of conflict within resource management debates. The plan of the book....

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(PLEASE DO NOT CITE WITHOUT AUTHOR'S PERMISSION)

**Analytic Frameworks for Understanding Emergent Values
in Resource Management**

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Participatory and collaborative approaches to natural resources planning and management have become increasingly important to agencies and communities seeking public support for decision-making processes and outcomes. In this climate, the concept of public input is being transformed, and correspondingly, researchers are proposing new ways to conceptualize values. Once viewed from traditional individualistic perspectives (primarily as cognitive schema or as economic choices), values are now conceived as socially constructed, emergent outcomes of public and private interaction. The values-as-social constructions approach suggests that values are produced through talk and text, as people read, listen to, interpret, question, and challenge others' definitions of "facts" and "truth," ultimately using their newly-created "knowledge" to address issues and attempt to solve problems. Such an approach encourages researchers to direct attention to theories and methods of communication, as well as to the interactional and structural patterns that organize communication in resource planning and management contexts. The goal of this presentation is to explore and describe an array of theories and methods centered around discourse and narrative perspectives in social science to understand the ways in which people collectively identify and represent values as reality. Specific applications to resource planning and management will be discussed.

Basic Approaches in Discourse Research (Linguistics) **(van Dijk 1997)**

Discourse as a form of language use

1. Sound, sight, body – phonology, semiotics, nonverbal
2. Order and form – syntax, context, functions of words/sentences
3. Meaning
4. Style
5. Rhetoric
6. Schemata – overall formal structures

Discourse as action and interaction

1. Speech acts
2. Conversation as interaction
3. Abstract structures vs. actual language usage

Discourse as cognition

1. Mental dimensions of language use (cognitive and emotional)

Discourse as society/context

2. Socio-demographic characteristics: gender, ethnicity
3. Culture
4. Social discourse analysis and applied discourse analysis
5. Critical discourse analysis

Table 1
Definitions of Discourse – Linguistic Approaches

Dictionary	Verbal communication; talk; conversation; to reason; a speech; to write or speak about formally
Harris (cited 151, in Schiffrin 1994)	<u>Discourse</u>: “the next level in the hierarchy of morphemes, clauses, and sentences” <u>Discourse analysis</u>: “derived from formal methods of linguistic analysis; break down texts into their constituent parts and the relations between those parts”
Schiffrin (1994)	<u>Formalist/structuralist definition of discourse</u>: “language above the sentence or above the clause; the way different units function in relation to one another disregarding contexts” (p.23) <u>Functionalist definition of discourse</u>: “study of any aspect of language use for social, expressive and referential purposes; discourse situated in context” (p.31) <u>Discourse as utterances</u>: “units of language production (whether spoken or written) that are inherently contextualized” (p.41) <u>Text</u>: “The linguistic content of utterances; the stable semantic meanings of words, expressions and sentences (but not the inferences available to hearers,” which is “context”) (p. 363)
Mills (1997)	<u>Discourse as a domain of communication</u>: “all utterances that have meaning and effects in the real world” (p.7) <u>Discourse analysis</u>: focus on structure of naturally occurring spoken language (conversations, interviews, speeches) <u>Text analysis</u>: focus on structure of written language (essays, notices, news)
Fairclough (1995)	<u>Discourse</u>: “a complex of three elements: social practice, discursial practice (text production, distribution and consumption), and text” (p.74) <u>Texts</u>: “social spaces in which two fundamental social processes simultaneously occur: cognition and representation of the world, and social interaction” (p.6) <u>Textual analysis</u>: “analysis of the form or organization of texts” including “linguistic analysis and intertextual analysis” (p.188) <u>Discourse analysis</u>: “maps systematic analyses of spoken or written texts onto systematic analyses of social contexts” (p. 187) (critical discourse analysis)

Table 2

Definitions of Discourse – Other Disciplinary Approaches

Shotter (1993)	<u>Utterance</u> : “an intrinsic unit of dialogue, produced in response to previous utterances” (p.180) (<u>Text & discourse</u> are not directly the focus of analysis; focus is on <u>processes of reality construction</u> such as strategies of making sense, conversation efforts, nature of relations, settings, consequences, etc.)
Atkinson (1990)	<u>Narrative</u> : “representation of events” (p. 104) <u>Ethnographic text</u> : “portrays the world as a series of patterned and comprehensible events (occasions, actions) by virtue of its narrative ordering: (p.105)
Manning & Cullum-Swan (1994)	<u>Texts</u> : “written documents” (p.463) <u>Text</u> : “a text, in poststructuralist terms, is not an object or thing, but an occasion for the interplay of multiple codes and practices” (p.468)
Potter (1996)	<u>Discourse</u> : “talk and texts as part of social practices” (p.105)
Shillingsburg (1997)	<u>Text</u> : multiple definitions: as matter, concepts, actions, units, contexts (p. 101-3) <u>Utterance</u> : “refers to the performances of works but also to the circumstances, the contexts of those actions that influence and contain...the meanings and help indicate what meanings are operable.” (p.88)

Table 3
Discourse Research – Linguistic Perspectives
(Schiffrin 1994)

	General Focus	Disciplinary Background	Analytic Approach	Data	Examples of Research
Speech Act Theory	Communication acts performed through speech	Philosophy (Austin 1962; Searle 1969)	Analyze conditions for production & interpretation of acts through words	Words, contexts, segments of texts	Sequencing of speech acts (Q/A; requests) & how acts specify responses
Interactional Sociolinguistics	Social & linguistic meanings created during interaction	Sociology (Goffman); Linguistics (Tannen, (Schiffrin); Anthropology (Gumperz)	Study how language is situated within the circumstances of social/cultural life	Utterances in social contexts and roles	Discourse strategies; code switching; interruptions; depending on interpersonal relations and context (encounters, situations)
Ethnography of Communication	Language & communication as cultural behavior	Anthropology (Hymes); Linguistics	Study communication structure/functions that constitute realities	Language acts in cultural settings & influences	Communication competence in cultural contexts (ex: queries)
Pragmatics	Meaning, context & communication of constructed utterances	Philosophy (Grice); Semiotics (Morris)	Make inferences about a speaker's meaning, intentions at level of utterances (sentences)	Speaker meanings in utterances & uses of linguistic signs	Quantity and quality of referring sequences in stories
Conversation Analysis	Sequential communication structures as basis for constructing social order	Ethnomethodology in sociology (Garfinkel, Schegloff, Jefferson)	Discover methods by which people produce a sense of order through conversation	Sequences and organization of utterances in context	Turn-taking in conversation; topic organization; mentions
Variation Analysis	Social & linguistic factors in texts that make form and meaning vary	Linguistics (Labov)	Discover formal patterns in texts & their variation	Analysis of a speech community and its narratives (texts)	Information structures (lists, descriptions); comparison of text-types

Table 4
Discourse Research – Social Science Perspectives

	General Focus	Disciplinary Background	Analytic Approach	Data	Examples of Research
Interpretivist research (Phenomenology, Ethnomethodology, Symbolic interactionism)	Understand the meaning of social phenomena	Phenom. (Schutz); Ethnom. (Garfinkel); SI (Blumer; Mead)	Deconstruct “social facts” into diverse discourses, interaction processes, signs, contexts	Actor’s point of view & behavior in the symbolizing activities of everyday life	
Constructivist & Constructionist research	Understand processes of constructing reality & making meaning (cognitive; social)	Social psychology (Goodman); Sociology & philosophy (Berger & Luckmann)	Interpret (individual; collective) generation of meaning shaped by language and social processes	Symbolic & language systems in everyday life	
Critical theory (also Cultural studies, Feminism, Ethnic studies)	Power relations mediate social life; research aimed at social critique	Frankfurt School (Horkheimer, Adorno, Marcuse); Foucault; Derrida; Habermas...	Discover ideologies that underlay social & institutional practices; emancipation	Discourses (language & conditions) defining social contexts	
Conversation analy.	Talk in interaction; study structure and functions of conversations				
Narrative analysis	Story-telling practices; wide range of genres and modes of representation; study story features or social/personal features				
Genre theory	How are texts alike/dissimilar? Explain linguistic, organizational and contextual features of texts				
Semiotics	Production and interpretation of signs and sign systems; evaluate texts for sign features and functions				
Rhetoric	Discourse calculated to influence audiences; critical reading of texts for speaker/audience, context, text features				
Discourse analysis	Talk & texts as part of social practices; critical analyses of methods of social construction; comparison across texts				

Table 5
Values and Discourse in Planning/Policy (General)

Kemp (1985)	“The term <i>public sphere</i> ...is employed by Habermas to refer to that area of public life in which
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	intersubjective agreement on values and standards can be reached in order to solve sociopolitical or practical questions....Habermas describes the public sphere as an area of society that arose between the absolutist state and bourgeois society, in which discoursing private citizens could freely and critically discuss practical issues and the role of the state.” (p.182)
Anderson (1987)	“...see public decision arising, ideally, out of a situation of discourse, in which a variety of perceptions, interpretations, claims, and contentions are commonly deliberated....Discourse seems to connote an extended exchange of ideas in which both proposals for action and prospective tests of the merits of such proposals are simultaneously deliberated....(it is) associated with a pragmatic conception of truth and the common good....(it) also implies advocacy, explanation, criticism...and deliberative judgment....” (p.34)
Dryzek (1990)	“The idea of a public sphere can inspire model political practice with at least two facets. The first is simply <i>discourse</i> , or free and open communication in public life, oriented toward reciprocal understanding, trust, and hence an undistorted consensus.” (p.38) “A discursive design is a social institution around which the expectations of a number of actors converge....the focus of deliberations should include, but not be limited to, the individual or collective needs and interests of the individuals involved.” (p.43)
Forester (1994)	“Public deliberation depends less on technique than on conversation...in which affected parties have always vulnerable, contingent abilities to participate, to voice their concerns.” (p.201) “an approach to deliberation and judgment (should) appeal to the public recognition and engagement of difference, a discursive ethics protecting and nurturing voice, an argumentative planning that seeks not deal-making but public imagination and reconstruction.” (p.202)
Benhabib (1996)	“The discourse model of ethics and politics (refers to) free public deliberation.... Such processes...increase and make available necessary information, allow the expression of arguments, and lead to formation of conclusions that can be challenged publicly for good reasons...(they also) allow self-referential critique of their own uses and abuses.” (p.87)
Table 6 Some Examples of Values and Discourse in Resource-Related Contexts	
Bengston (1994)	(not discourse specifically, but forest values reviewed primarily from positivistic models; does mention content analysis as tool for analyzing changes in public attitude to wildlife over time)

O'Hara (1996)	Uses Habermas' concept of discursive ethics to study ecosystem valuation and environmental policy. "Discursive ethics is a communicative process in which discourse participants share their concerns, expecting mutual acceptance and respects for their positions....(it) offers the potential for making visible the hidden normative assumptions, behaviors, and motivations which influence de-facto decision-making and valuation processes." (p.97)
Wondolleck (1996)	"...spiritual values are qualitatively different from economic or political values...." (p.258) "At the heart of these successful efforts (to accommodate diverse viewpoints) is an emphasis on building understanding between parties, providing at long last the opportunity to talk face-to-face in a way that shatters old stereotypes, in a way that the needs and concerns of the multiple interests can truly be understood and acted upon." (p.261)
Edwards (1998)	Studies "multiple discourses of participatory citizenship": "the community participation strategy seeks to colonize the moral high ground and legitimize a particular trajectory for development through a discourse of practice that has gone largely unexamined...it contains multiple strands of meaning and intent (that) reflect complex, interconnected networks of associations and power...(and is thus) open to a range of interpretations each with different latent and overt purposes." (p.66)
Taylor (1998)	Suggests that "mistaken judgments of interest" can be minimized by a discourse model of planning because "people are likely to become better judges of their interests when they engage in considered reflection about their values in discussion with others." (p.72)
Shanahan et.al. (1999)	Attempts to assess environmental attitudes/concern using narratives: "People develop environmental beliefs, values, and behaviors in and through communicative processes" (p.407). "narratives may tap into and partially stem from the rationally formed attitudes people have about environmental issues (and are) a type of communication that people use to make decisions about environmentally relevant issues." (p.408)
Table 6 (cont.) Some Examples of Values and Discourse in Resource-Related Contexts	
Roe (1994)	Applies literary theory to complex public policy issues. "Stories (i.e., policy narratives) commonly used in describing and analyzing policy issues are a force in themselves...(they) often resist change...even in the face of contradicting empirical data, because they continue to underwrite and stabilize the assumptions for

	decision making in the face of high uncertainty, complexity, and polarization.” (p.2)
Hajer (1995)	“...the new environmental conflict should not be conceptualized as a conflict over a predetermined unequivocal problem with competing actors pro and con, but is to be seen as a complex and continuous struggle over the definition and the meaning of the environmental problem itself....The approach used is discourse analysis, which is employed to illuminate the social and cognitive basis of the way in which problems are constructed.” (p.15)
Peluso (1996)	Evaluates narratives of two conservation case studies to “explore the ways that resources may be redefined, valued, and subsequently managed” (p.136). “The state’s interests in controlling both discourse and resource use are primarily two: power...and economics.” (p. 138)
Peterson (1997)	Analyzes the rhetoric of concept of “sustainable development” in three case studies. “Nature, in and of itself, is not a rhetorical text. The acts of sustaining and/or developing it and the discussion surrounding those acts, however, do function rhetorically.” (p.3)
Lauber & Knuth (1998)	Evaluation of moose management plan suggests reformulating citizen participation from “what do citizens want?” (preferences) to “what do citizens believe that government should do?” (collective values) using a deliberative planning process
Bridge & McManus (2000)	Why do forestry and mining sectors remain strong in environmentally-conscious world? Authors argue that “profusion of environmental narratives within these two sectors serves a regulatory function by relegitimizing business practices....By adopting the rhetoric of sustainable development, the forestry and mining industries are able to coopt the language of environmental protest, at once disenfranchising opposition and establishing themselves as authority and guardian of protestors’ ideals.” (p.38)

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